Clarendon Press Series

A MANUAL
OF
COMPARATIVE PHILOLOGY

PAPILLON

REFE NCE

London

HENRY FROWDE

OXFORD UNIVERSITY PRESS WAREHOUSE

7 PATERNOSTER ROW

Clarendon Press Series

A MANUAL

OF

COMPARATIVE PHILOLOGY

AS APPLIED TO THE ILLUSTRATION OF

GREEK AND LATIN INFLECTIONS

REFERENCE

BY

T. L. PAPILLON, M.A.

Fellow and Tutor of New College, Oxford
Formerly Scholar of Balliol, and Fellow of Merton

THIRD EDITION, REVISED AND CORRECTED

Oxford

AT THE CLARENDON PRESS

1882

REFERENCE

PREFACE.

This book contains the substance of lectures delivered at Oxford in 1874 and 1875 to candidates for Honours in Classics at the First Public Examination, upon the prescribed subject of 'the Elements of Comparative Philology as applied to the illustration of Greek and Latin Inflections,' and therefore does not profess to deal with more than a very limited portion of the wide field covered by the Science of Language. In the course of my lectures I was often met by the difficulty of recommending to pupils any English text-book that would give them in a compact and accessible form the means of preparing the subject for themselves[1], and I had hoped that the want thus felt might have been supplied for our students by the Oxford Professor of Comparative Philology. So long as there was any prospect of help from that quarter, it would have been presumptuous in me to come forward. But Professor Max Muller was unable to spare time from more important labours, and the preparation of this Manual was perforce entrusted to very inferior hands.

As to the educational value of the limited area of philological study which is here surveyed, I am aware that opinions differ. It is said, for example, that a study of the forms of Greek and Latin words is a mere effort of memory, testing neither the reflective powers nor the application of deductive method, and therefore not worth introducing as a separate subject into the curriculum of study for Classical Examinations at Oxford. It might, I think, be asserted with equal truth that, inasmuch as some acquaintance with the history of Greek and Latin Inflections as read in the light of Comparative Philology is essential to an intelligent study of the grammar of those languages, some knowledge of the elements of that science might fairly be exacted from all candidates for classical honours. I am not however concerned with a defence of the study of Comparative Philology. Its bearings upon some of the most interesting problems of ethnology, of history, and of religion are too well known to require assertion, and if a mere knowledge of the forms of two or more languages seems to carry the student but a little way towards these higher regions of the science, it must be remembered that such elementary knowledge, small at first and gradually and carefully extended, is the only sure foundation for more advanced research, without which all enquiry into higher problems may lose itself in a wilderness of conjecture. I believe that a minute study and comparison of the forms of two such languages as classical Greek and Latin, or of two or more among the languages of modern Europe, with a due comprehension of the laws of phonetic change that have operated to produce existing divergences from common forms, is the best possible preparation for an adequate grasp of any of the higher problems into which the science of language enters. It has an interest too in itself, the interest of tracing in different languages the divergence, under regular processes of phonetic change, of words and forms common to them all, the interest of detecting meaning and force in much that appears at first sight arbitrary and unmeaning, above all, the interest of watching the *life* of a language and its perpetual growth and change in the mouths of those who speak or have spoken it No apology, I think, is needed for any attempt to lay in the minds of boys or young men the foundation, however limited, of such a study

---

[1] Since this was written, Mr Peile's 'Primer of Philology' (Macmillan) has provided beginners with an admirable little introduction to the study of Comparative Philology.

The arrangement which I have adopted is that which has been found most convenient for teaching purposes In its main outlines it is the same as that adopted by Schleicher in his 'Compendium der Vergleichenden Grammatik,' and by teachers in the schools of Germany, if I may judge from a useful little summary entitled 'Sprachwissenschaftliche Einleitung in das Griechische und Lateinische, für obere Gymnasialclassen,' by Professor Baur of Maulbronn[1] It will be observed that the names referred to below as of leading authority are (unless England has by this time established a claim to Professor Max Müller) mainly German, and it is not too much to say that at present Comparative Philology cannot be thoroughly studied without at least a moderate acquaintance with the German language But the best German philological works (to say nothing of their size and cost) are often, from the very exhaustiveness of their treatment, only confusing to beginners, who require a smaller array of facts more simply and clearly arranged And valuable as are the translations into English of such works as Bopp's 'Comparative Grammar,' Curtius' 'Principles of Etymology' or 'The Verb,' or Schleicher's 'Compendium,' to the advanced student or teacher, they are both in quantity and quality above the requirements of the schoolboy or the undergraduate during the first period of his

---

[1] Accessible to English readers in a translation by Messrs C Kegan Paul and E D Stone (H S King and Co, 1876)

University life: to serve whom is the less ambitious, but I trust not less useful aim, of the present work.

I have still to admit, and to claim indulgence for, an imperfect knowledge of the Sanskrit forms necessary for the illustration of corresponding forms in Greek and Latin. But in preparation for the second edition (1877) the work had the advantage of revision (so far as the Sanskrit forms are concerned) by Professor Max Muller, and the present edition has had the additional advantage of supervision by Mr D B Monro. Their united authority may command a confidence that otherwise would be beyond my reach. To secure a uniform system of transliteration from Sanskrit to Roman character, I have given below a Table of the Devanāgarī letters with their equivalents as employed in this book. Of the two alternative modes of representing the 'palatal' and 'cerebral' mutes given in Professor Max Muller's own table, I had in the second edition adopted that which represents them by the 'guttural' and 'dental' characters respectively in a different type, e g **k**, **kh** (guttural), *k*, *kh* (palatal), t, th (dental), *t*, *th* (cerebral) but it now seems to be on the whole more convenient to follow the majority of German philologists in the employment of a uniform type, and to represent the 'palatal' mutes by **c**, **ch** (*tenues*), **j**, **jh** (*mediae*), the 'cerebral' mutes by **ṭ**, **ṭh**, **ḍ**, **ḍh**, and the palatal sibilant by **ç**. The employment of *j* in this connection involves its abandonment in Latin words as the expression of the consonantal (semivowel) sound of *i*, which corresponds not to the palatal *media* (ज, **j**), but to the palatal 'spirant' (य, **y**) and, though the convenience (as with *u*, *v*) of two distinct characters for two distinct sounds is thus sacrificed, the misleading associations of the English pronunciation of *j* in e g. *judex* (*iudex*) are thereby avoided. As a representative of the Sanskrit palatal media, *j* retains something nearly approaching its English pronunciation In column V of the table on p 42 will be found stated the *probable* pronunciation of the letters of the Roman alphabet, and where this differs from the English pronunciation of the same letters (as in the vowels *a*, *e*, *i*, *u*, the consonants *c*, *g* before *e*, *i*, and the semivowels *j*, *v*), the Roman, not the English, pronunciation is presumed in all Latin words cited With this caution, I hope that any confusion as to the relation between the letters in question and the sounds represented by them, into which English usage might lead us, may be avoided

For corrections and hints towards the preparation of this edition I have to thank, among others, an American correspondent (Mr J E Goodrich, Burlington, U S A) who has pointed out some typographical errors in the previous edition But my chief debt has been to Mr D B Monro, Vice-Provost of Oriel College, who has most kindly looked through the whole book in its second edition, and many of the proof-sheets for the third, and has favoured me with many valuable corrections and suggestions Some of these are acknowledged where they occur, but their sum-total exceeds the limits of due acknowledgment Those who best know Mr Monro's calibre as a scholar and philologist will be most ready to believe that any advantage in consistency, clearness, or accuracy which the present edition may have over its predecessor, is due to him, and least willing to lay at his door the responsibility for any faults or inaccuracies that still remain To the Delegates of the Clarendon Press I need only repeat my thanks for care taken and courtesy shown in all arrangements for publication

T L. P.

NEW COLLEGE, OXFORD, 1882

Table of the Devanāgarī Sanskrit Alphabet, with the corresponding Roman characters employed in transliteration of Sanskrit Words (adapted from Max Muller's 'Sanskrit Grammar for Beginners')

	Tenues	Aspirated Tenues	Mediae	Aspirated Mediae	Nasals	Liquids	Sibilants	Vowels[1]		Diphthongs
								Short	Long	
Gutturals.	क k	ख kh	ग g	घ gh	ङ n	ह h		अ a	आ ा ā	ए े e ऐ ै ai (ē)
Palatals.	च c	छ ch	ज j	झ jh	ञ ñ	य y	श ç	इ ि i	ई ी ī	
Linguals (or Cerebrals)	ट t	ठ th	ड d	ढ dh	ण n	र r	ष sh	ऋ ृ ri	ॠ ॄ rī	ओ ो o औ ौ au (ō)
Dentals.	त t	थ th	द d	ध dh	न n	ल l	स s	ऌ ॢ li	ॡ ॣ lī	
Labials	प p	फ ph	ब b	भ bh	म m	व v		उ ु u	ऊ ू ū	

Unmodified Nasal (Anusvâra), m

Unmodified Sibilant (Visarga), h

---

[1] Each vowel (except अ a) has two signs, the first initial, the second used when it follows a consonant. See below, p 35, note 3.

LIST OF AUTHORITIES REFERRED TO IN THE PRESENT WORK.

Bopp's 'Comparative Grammar,' translated by Eastwick

Max Muller, 'Lectures on the Science of Language'

'Chips from a German Workshop,' 4 vols

'Selected Essays on Language, Mythology, and Religion,' being a republication of the more important 'Chips,' with some additional papers Longmans, 1881

Schleicher, 'Compendium der Vergleichenden Grammatik' 3rd edition, 1871. (Translated into English by Mr H Bendall Trübner, 1874-1877)

Corssen, 'Ueber Aussprache, Vokalismus und Betonung der Lateinischen Sprache' 2nd edition, 1868 (*The* authority for Latin philology, and the storehouse from which Peile, Roby, Wordsworth, and others mentioned below, have drawn much of their information)

'Kritische Beitrage,' and 'Kritische Nachtrage zur Lateinischen Formenlehre'

Curtius, 'Grundzuge der Griechischen Etymologie' 2nd edition, 1866 (Translated into English by Prof Wilkins and Mr England, of Owens College, Manchester)

'Tempora und Modi,' an admirable treatise on the formation of Tenses and Moods in Greek and Latin Berlin, 1846 (Now out of print)

'Das Verbum der Griechischen Sprache' Vol i 1873 vol ii 1876 The latest result of Curtius' studies, superseding much of 'Tempora und Modi' (Translated into English by Messrs Wilkins and England Murray, 1880)

'Greek Grammar' (Published in English as 'The Student's Greek Grammar')

'Greek Grammar Explained,' or 'Elucidations,' a translation by Mr E Abbott of 'Erlauterungen zu meiner Griechischen Schulgrammatik,' published by Prof Curtius in 1863, as a companion to his 'Greek Grammar'

Leo Meyer, 'Vergleichende Grammatik der Griechischen und Lateinischen Sprache' (Especially valuable for its exhaustive collection of examples, from which the student can form his own induction as to particular formations)

Peile, 'Introduction to Greek and Latin Etymology,' 3rd edition (Macmillan, 1875)
A Primer of Philology (Macmillan, 1877)

Roby, 'Latin Grammar (Vol I) on Sounds, Inflections and Word-Formation' (Macmillan, 1871)

Sayce (Rev A H, Fellow of Queen's College and Deputy Professor of Comparative Philology, Oxford), 'Introduction to the Science of Language,' 2 vols (C Kegan Paul and Co, 1880)

Wordsworth (Rev John, Brasenose College, Oxford), 'Fragments and Specimens of Early Latin' (Clarendon Press, 1874)

Ferrar, 'Comparative Grammar of Sanskrit, Greek, and Latin,' Vol I (The author's death unfortunately left the work half-finished before he had treated of Verb Inflections)

Farrar (Rev Dr, Canon of Westminster), 'Chapters on Language,' and 'Families of Speech'

Whitney (Professor of Sanskrit and Comparative Philology in Yale College, U S A), 'Life and Growth of Language' (Published in England by H S King and Co, 1875)

Monro (D B, Vice Provost of Oriel College, Oxford), 'A Homeric Grammar' (Clarendon Press, 1882)

CONTENTS.

CHAPTER I

PAGE

INTRODUCTORY 1-3

CHAPTER II

CLASSIFICATION OF LANGUAGES—

'Morphological' and 'Genealogical' classifications—Table of the Indo European Family—Table of correspondence between its members—'Romanic' or 'Romance' languages, their origin—Table of correspondence between them—Features of change from synthetic to analytic languages exhibited by them 4-27

CHAPTER III

CLASSIFICATION OF SOUNDS—

General principle of phonetic change to secure ease of articulation—Comparative strength or difficulty of sounds according to the physical conditions of their production—Consonants, their threefold classification—Vowels and Diphthongs Relation of sounds to letters—Sanskrit alphabet 28-39

APPENDIX TO CHAPTER III—

On the Greek and Roman Alphabets 40-48

CHAPTER IV.

CHANGES AND MODIFICATIONS OF SOUNDS—

General principles—'Dynamic' change Reduplication, Vowel-Intensification, and Nasalisation—'Phonetic' change Substitution, Loss, Assimilation, and Dissimilation of Vowels and Consonants—Changes due to indistinct utterance—National peculiarities of utterance—Grimm's Law . . . 49-91

CHAPTER V

PAGE

FORMATION OF WORDS—

Radical and Formative Elements—Roots, Stems, and Inflections—Processes of Word Formation 92-101

APPENDIX TO CHAPTER V—

A List of Nominal Suffixes—B Derivative Verbs in Greek and Latin 102-104

CHAPTER VI

NOUN INFLECTION—

Number of Cases—Gender and modes of Generic Distinction—Declension—Suffixes of Case-Inflections in detail—Comparison of Adjectives—Paradigms 105-141

CHAPTER VII

INFLECTION OF PRONOUNS—

Pronouns without Gender First and Second Personal, and Reflexive—Paradigms—Pronouns with Gender Paradigm of stem *ta*-—Peculiarities of Latin Pronominal Declension 142-157

CHAPTER VIII

VERB-INFLECTION—

Distinction between Noun and Verb—Augment, Thematic or Connecting Vowel—Classification of Verbs—Person-Endings—Mood Signs—Tense-Stems and their formation—Infinitives and Participles 158-240

APPENDIX I

Specimens of Early Latin Inscriptions 241

APPENDIX II.

Formation of Adverbs in Greek, Latin, and Sanskrit—Table of Prepositions 247

General Index 257

Index of Sounds and Forms Explained 261

CHAPTER I

INTRODUCTORY

Object the wo

Prelimi questio

THE main object of the present work, as indicated by its title, is the philological explanation of the Inflections in Greek and Latin For the purposes, however, of such explanation it is necessary to presume a certain acquaintance with the main results of the Science of Language or Comparative Philology, and with the terms commonly in use among philologists, and we must begin with understanding, (1) the general classification of Languages, and the place in the history of human speech of those languages with which we are immediately concerned, viz. Greek and Latin; (2) the classification of Sounds and the letters by which they are represented, and of the processes of change which sounds have undergone in human speech, (3) the constituent elements of language—i e 'roots' or simplest forms, and formative elements, including Inflections Into questions of the origin of language, and the connection between its simplest discoverable forms and the ideas expressed by them, we need not enter The balance between the two extreme views of language as a conventional[1] production—a view based upon the

---

[1] The view that language is 'conventional,' in the sense that people meet or ever met together to deliberate on the meaning and changes of words, is of course easily ridiculed. The term, however, may also be applied to language in opposition to the idea that there is any *necessary* connection between words or 'roots' and the ideas signified by them, or that there are organic forces of growth in speech itself which, by some mysterious natural process, without human agency, produce new material and alter old These ideas exercise a kind of fascination over some students of language, but it is reasonably maintained that spoken language (as distinct from the *faculty* of language implanted in man) is an

cussion
he Na-
e and
gin of
guage
eces-

apparent meaninglessness of its formal elements—and language as an organic being, producing those formal elements by virtue of a mysterious principle of growth inherent in its nature, has been clearly drawn by Professor Max Muller in those Lectures on the Science of Language[1], 'to whose world-wide popularity (it has been well said) Comparative Philology owes its present position and its present charm' and for this question, with others that relate to the aim and methods of Comparative Philology, we cannot do better than refer to a book which for every English student of that science should be the avenue by which he approaches it But we may examine the relation of Latin and Greek words to each other or to Sanskrit, or trace the history of varying forms in any one language, without touching such questions as that of the Onomatopoeic or Interjectional origin of human speech (the 'Bow-Wow' and 'Pooh-Pooh' theories of Professor Max Muller), or deciding whether language arose from imitations of cries and sounds (as it often does in the nursery) or from exclamations expressive of pleasure or pain or other emotions of mind or body The furthest researches into the history of language and the utmost possible analysis of written or spoken languages bring us to certain primitive and elementary combinations of sounds which we call 'roots,' but we cannot arrive with any certainty even at the ultimate *form* of these roots The earliest traceable condition of that 'Indo-

---

external medium of communication, learnt in childhood by mere imitation, and not inherited as a race characteristic, or independently produced by each individual with his mental and bodily growth The acquisition by each individual of his own language in childhood is the gradual accumulation, by imitation of those around him, of a stock of signs, which are so far arbitrary and 'conventional,' in that each is bound to the idea signified only by a tie of mental association, and not by any natural and necessary connection 'Language' is not a faculty or capacity, but a developed result, and the assumption that man is gifted at his birth not only with the capacity, but also with its elaborated results, is a theory, not of a Divine, but of a 'miraculous' origin of speech

The question of the Nature and Origin of Language is treated in a popular form by Prof Whitney in his 'Life and Growth of Language' (see especially ch xiv) He assigns a more important place to the 'imitative' or 'onomatopoeic' principle than some philologists allow, but on a question of this nature much latitude of opinion is possible, and his remarks are very suggestive and instructive

[1] See Lectures, Series I. Lect. v on 'Comparative Grammar'

European' speech, of which (as we shall see) Sanskrit, Greek, and Latin, with the other languages comprised under that term, are dialectical varieties, is evidently far removed from the primeval time when language first arose—as is clear, among other reasons, from its highly developed vowel-system, and the employment of vowel change rather than the earlier and simpler method of reduplication[1] to express modifications of ideas: and therefore speculations as to the connection between its elements and the ideas expressed by them can be of little use for the purposes of a science which (as Professor Max Muller points out) collects *facts* and accounts for these facts as far as possible. It is at least probable that language owes its origin to a combination of imitational and interjectional sounds for it is difficult to assign any other origin to speech, and the phenomena of dawning speech in infants point to this as one natural origin for conscious sound but the existing materials of language, with which alone Philology has to do, give us no data upon which to base any calculations as to the exact mode in which such growth of speech began Passing by, therefore, such questions, we may proceed to the consideration of the points already mentioned as introductory to the explanation of Greek and Latin Inflections, viz the classification of languages, the classification of sounds, the changes and modifications of sounds, and the elements of word-formation These will occupy the next four chapters, and the discussion of Inflections properly so called will follow in chap vi.

---

[1] On this point consult Peile's 'Introduction to Greek and Latin Etymology,' pp 173 sqq (3rd edition), and see below, ch iv

CHAPTER II.

CLASSIFICATION OF LANGUAGES

GREEK and Latin are 'inflectional' languages of the 'Indo European' family These terms refer to a double classification viz. (*a*) *morphological*, according to the mode in which modifications of ideas are expressed by combination of primitive elements, (*b*) *genealogical*, according to similarity of grammatical forms

(*a*) The 'morphological' classification distinguishes three 'stages' of growth in language[1] —

1 'Radical' or 'Isolating,' in which the simplest elements of speech or 'roots'[2] are employed as words, without modification of their own sounds or combination with each other mere juxtaposition of isolated roots expressing modification of ideas Chinese and its kindred dialects are examples of this stage

2. 'Agglutinative' or 'Terminational,' in which roots are joined together to form words In such compounds one root loses its independent form, and appears as a sound expressive of meaning tacked on (as prefix or suffix) to the other, which remains as the primitive element or 'root' of the word The Finnish and Tataric languages, and the dialects of the aborigines

---

[1] For details which are beyond the province of the present work, see MAX Müller's Lectures, Series I Lect viii (on 'Morphological Classification')

[2] It is necessary here to anticipate the distinction (explained below in ch v) between the '*radical*' elements in words or '*roots*,' i e the simplest part of each word which expresses its general idea or meaning, and the *formative* elements by which this general idea, common to many words, is defined and modified For purposes of instruction, ch. v may, if it seems convenient be taken before ch ii

of the Pacific Islands (grouped by Professor Max Müller and others under the name 'Turanian') appear to be in this stage.

3 'Inflectional,' in which both roots (i. e. the 'root' proper and the suffix) are modified according to regular processes for the expression of meaning. The Semitic and Indo-European families of speech fall under this head

of the
stages
morph
cal

This classification may be illustrated by constructing an imaginary history, passing through these three stages, of some Greek or Latin word, e g *εἶμι* (*ibo*) The ultimate forms or 'roots' to which philological analysis has reduced the two syllables of which this word is composed, are *i* (idea of 'going') and *ma* (1st personal pronoun). We should have these roots combined in the Radical stage by simple juxtaposition [*i ma*]; in the Agglutinative, by suffixing one to the other, and modifying the root thus suffixed [*i-ma*, *i-mi*], in the Inflectional, by modification of both roots [*ai-mi*, *εἶμι*]

The
'stag
always
tuall
sive;

The student must bear in mind that this is a classification, not of languages, but of varieties of linguistic development; and that though, when we speak of Chinese as 'Isolating,' Hungarian as 'Agglutinative,' Greek and Latin as 'Inflectional,' we give a correct idea of the general characteristics of those languages, and their *structural* contrast to each other, we do not imply that there is in any one of these languages no trace of the structural characteristics of the others The higher 'agglutinative' dialects (e g Finnish and Hungarian) are almost inflectional, and in some respects analogous to the Indo-European languages, while in inflectional languages many forms are found in which the 'root' maintains its own form and distinction from the suffixes, no less completely than in an agglutinative language Thus to take the Greek word just employed as an illustration; beside *εἶμι*, a typical inflectional form, we have *ἴ-μεν*, *ἴ-τε*, in which the root proper remains unmodified[1]. Again, beside *εἰμί* (*sum*), we have the dialectical variety *ἐσμί* (Aeol.), in which the root as of the Sanskrit asmi remains in a much less modified form—the ε being at most a phonetic variety of $\breve{a}$[1] (see p. 36)—and which in this respect of root modification marks a transition stage, and that not very far upon the road, from Agglutination to Inflection. And as in English the line between mere juxtaposition and word composition is often hard to draw, cp e g 'house floor' and 'housetop,' 'godlike' and 'godly,' so it is often in languages of low development a matter of doubt where isolation ends and agglutination begins, and even Chinese, the purest example of the first, is by some regarded as being in its colloquial forms and in some of its dialects a language of compounded words

---

[1] It should be stated that recent philological researches (especially of Fick and De Saussure) have made it probable that in *εἶ-μι* as cp with *ἴ-μεν*, *ἔχω* (*σεχ-ω*) cp. with *ἔ-σχ-ον*, *πείθω* cp. with *ἔ-πιθ-ον*, the longer form of the root is the older. See Monro, 'Homeric Grammar,' § 37.

On the other hand, it is misleading to speak of these 'stages of development' as marking a definite *historical* progress of individual languages from a lower to a higher state of civilisation History offers no proof that all inflectional languages have previously passed through an agglutinative stage of development, or that isolating languages must pass on with increasing civilisation to an agglutinative and finally to an inflectional stage What has once *become*, remains. Chinese, which at a very early stage became what it is, a language of the 'isolating' type, remained in that condition, and, like Chinese civilisation, stopped once and for all in its growth It remained, so to speak, a precocious child, while of inflectional languages it may be said that they grew to manhood before they stopped—the agglutinative stage representing an intermediate period of advance from childhood towards manhood As *languages*, sufficiently developed for the purposes of national speech, those of each type remain what they have once become—isolating like Chinese, agglutinative like Tataric, or inflectional like Latin. This fact, however, need not preclude the supposition that in the earliest growth of *language*—a growth which lies far beyond the remotest period to which the evidence of, or inference from, the facts of written or spoken languages carries us back—the elements out of which it grew must have exhibited the progressive stages of which we speak. 'Agglutination,' for instance, presupposes two things which could be 'glued' together: that is, it presupposes an earlier stage of 'isolation' 'Inflection' presupposes something which was not 'inflected,' but was capable of being so, that is, it presupposes a state of either isolation or agglutination, or of both in succession These 'stages' then are (as has been already pointed out) varieties of linguistic development, the developed results of which, in written or spoken languages, exhibit as a rule the characteristics of one or other variety, not of two or of all in succession

---

[1] De Saussure ('Mémoire sur le Système Primitif des Voyelles dans les Langues Indo-Européenes') shows a reason for thinking that the *a* sound was already modified in *pronunciation* both in Sanskrit and in the primitive Indo-European speech, though it was reserved for Greek to express this varied pronunciation in written character.

With this limitation it seems perfectly reasonable to reconcile this theory of three stages of development with the facts of language, which offer little evidence of actual progress by individual languages from one stage to another They are types or varieties of development, not historical stages of growth. Accordingly, though spoken Chinese and some of the higher agglutinative dialects are said to approach more or less to inflection, their general characteristic remains what it always has been And in Indo-European languages, though analysis of the verb-inflections (above, p 5) seems to point to an earlier agglutinative stage and a still earlier period of simple isolated roots, we cannot as a matter of fact point to a period when the two parts e g of *εἶμι* were ever of full and equal power as independent words in language, and though we may trace formative suffixes back to roots with general meanings [e. g. *-tar* in *pater*, *mater*, etc, and the terminations in *-τωρ*, *-tor* of nouns of agency, to the root = to 'cross' or 'get through' (with a thing) which appears in *trans* and *through*], we do not thereby prove the previous existence, as historical fact, of an isolating or agglutinative stage (i e of an invariable root) in what are, and so far as our evidence goes always have been, inflectional languages. Comparison and analysis of the Indo-European languages enable us to form some conception of the state of civilisation attained by those who spoke the primitive mother tongue upon the table lands of Central Asia—a civilisation probably much below the contemporary civilisation of China. There is, however, no evidence to connect these stages in the growth of language with stages of civilisation and we see that the language of China remained in the isolating stage, while that of our Indo-European ancestors must have already passed from the stage of isolation through that of agglutination to the inflectional stage, in which it is presented to us by the earliest ascertainable *data* of Philology These *data* show us the case and person endings, for example, in the condition of grammatical forms—inflections or modifying suffixes, and there is no trace, as far as meaning goes, of their having ever been separate or agglutinated particles. While Chinese has remained in the most primitive stage, fossilised, so to speak, like the whole Chinese civilisation, the Indo-European languages, so far as we can trace them, have always been in the most advanced stage but for enquiry into the causes of this difference, which is an enquiry into the mental characteristics of the different races of mankind, the facts of language offer no foundation and it is of these facts alone (as has already been said) that Comparative Philology takes cognisance

(*b*) Genealogical Classification —

This classification gives us three main 'families' or groups of languages, according to similarity (*a*) in vocabulary, (*b*) in grammatical forms viz

1. *Semitic*, including Hebrew, Arabic, Assyrian, and their kindred dialects

2. *Indo-European* (otherwise called 'Indo-Germanic' or 'Aryan'), including the following subordinate classes or groups —Indic, Iranic, Hellenic, Italic, Keltic, Slavonic, and Teutonic

The languages comprised under both these heads are 'inflectional'

3 *Turanian*[1] (otherwise called 'Ural-Altaic,' 'Mongolian,' 'Tataric,' or 'Scythian'), including the languages of the nomadic

---

[1] The name '*Turanian*,' familiar from its use by Prof Max Müller, is retained as a designation of the 'class' of languages, for which some prefer one or other of the names here quoted See Whitney, 'Life and Growth of Language,' pp. 231, 232

races of Asia and Europe (Laplanders, Hungarians, Samoyeds, Turks, Mongols, Tartars, etc), and the dialects of Siam, Malay, and the Polynesian Islands. These languages are all 'agglutinative,' and though it is impossible to trace in them anything of the same family likeness of vocabulary or grammatical forms, as in the Indo-European or Semitic groups—the absence of such family likeness being naturally characteristic of the dialects of a nomad population, among whom no nucleus of a political, social, or literary character has ever been formed, which could give fixity to and create definite standards for language—we may accept, as sufficient warrant for the application to them of the term 'class' or 'group,' the statement that 'some of the Turanian numerals and pronouns, and many Turanian roots, point to a single original source, and the common words and common roots which have been discovered in the most distant branches of the Turanian stock warrant the admission of a real, though very distant, relationship of all Turanian speech[1]'

It is, however, with the 'Indo-European' languages that we are now concerned The fact implied by this name is now a familiar truth established by Comparative Philology, viz that a comparison of the languages of all the civilised races of Europe, and two at least of those of Asia (Indian and Persian), proves beyond doubt that these languages are branches of a common stock, and with reasonable probability that there was once a time when the ancestors of Germans and Slaves, of Greeks, Italians, and Kelts, of Persians and Hindús, were settled in a rudimentary stage of civilisation upon the plains of Central Asia[2], and spoke the same language, subject to such dialectical variety as must always arise in a primitive state of society, with imperfect communication between the scattered members of a single nation or even of a single tribe This time is, however, pre-historic, and though, upon the evidence of language, philologists sketch out for us the state of civilisation and manners of this primitive people, and even claim to restore the 'Ur-sprache' or primitive language anterior to any dialectical variation, we cannot regard these as historical facts, the only *facts* before us being the phenomena exhibited by different kindred languages, by Sanskrit, Greek, Latin, etc, which we group under the term 'Indo-European[1]'

---

[1] Max Müller's Lectures, I viii

[2] 'We may picture the tribes which used the parent-Aryan speech as living on the slopes of the Hindu-Kush, in the high central table-land of Asia, and watching the sun as it set evening after evening behind the waters of a great inland sea.' Sayce, Introd. to the Science of Language, ii. p 124.

This term seems to be that of widest meaning, and most obviously inclusive of all the languages in question The name *Indo-Germanic*, employed by many German scholars, is hardly comprehensive enough of the European branch of the family, while the names *Sanskritic*, *Japhetic*, *Mediterranean* (suggested by Ewald), and *Caucasian*, are each open to the objection of countenancing misleading notions[2] There remains the term *Aryan*, popularised in this country by Professor Max Muller's Lectures, and employed by many philologists as a designation of the Indo-European family, but by some in the more restricted sense of *Indo-Iranian*, i e to denote the Asiatic sub-division of the Indo-European family. This latter usage, however, is likely to create confusion with its much more frequent use in the wider signification of Indo-European[3]

---

[1] The forms of the original language can only be arrived at approximately, and may often be wrongly inferred, as would probably be the case if Latin were lost and had to be recovered by comparison of the Romance languages But to be of any value for illustration they must be conceived as having had a real existence

[2] *Sanskritic* might suggest the idea that all Indo-European languages are derived from Sanskrit, *Japhetic*, from the Hebrew point of view of the three ancestors of the human race, would include tribes in Northern Europe and Asia who speak Turanian languages, *Mediterranean* refers only to one phase in the history of Indo-European nations, and the central position once occupied by, but now no longer belonging to, the people who spoke these languages, and *Caucasian* implies the reverse of truth, for it seems clear that no Caucasian tribes, with the exception of a small colony at Iron (?=Aryan), belong to Indo European races

[3] The term *Aryan* has the advantage over *Indo-European* of being short and (as a word of foreign origin) of lending itself more easily to any technical definition that may be assigned to it and as a mere ticket or label of classification, there is no doubt much to be said for its use. I should not therefore presume to discard it altogether, but I still think that the fact implied on the face of the term *Indo-European* (a term sanctioned by the high authority of Bopp) is a good reason for on the whole preferring this latter term The existence too of another and more limited use of the term *Aryan* (as=Asiatic or Indo-Iranian) is somewhat

The languages comprising the Indo-European (or Aryan) family may be arranged thus in three main divisions —

A Asiatic Division* —

- I. *Indic*
  - *a.* Sanskrit, the ancient literary language of the Vedas, or sacred books of the Hindús Prakrit (including Pali, the sacred language of the Buddhists in Ceylon) being the provincial dialects of the mass of the community[1]
  - *b* Modern Indian dialects, Hindi, Bengali, Mahratti, etc
- II *Iranic*
  - *a* Zend (or Old Bactrian), the language of the Zend-Avesta or sacred books of the religion of Zoroaster
  - *b* Old Persian, of the 'cuneiform' inscriptions
  - *c* Pehlavi or Huzvaresh, the language of translations of the Zend-Avesta and coins of the Sassanidae, much subject to Semitic influence
  - *d* Modern Persian
  - *e* Armenian, and Kurdic dialects (?)

B. South-West European Division —

- III *Hellenic*
  - *a.* Ancient Greek.
  - *b* Modern Greek

---

against its acceptance as *the* technical term for the whole family of languages It is, however, retained by some philologists as a collateral term with *Indo-European* For the origin and uses of the term **ârya** I need only refer to Prof Max Muller's Lectures, I vi pp 224–236, 1st edition [I am glad to find, what at the time this note was first written I did not know, that I have the support of Mr Peile in preferring 'Indo-European' ('Introduction,' p 34, 3rd edition)]

[1] The word 'Sanskrit' (**Samskrita,** संस्कृत = *confectus, constructus*) means what is rendered 'fit' or 'perfect,' i e. for sacred purposes, hence 'purified,' 'sacred,' 'Prakrit' (**Prâkrita,** प्राकृत = 'derived' or 'secondary') is the term applied to the spoken dialects which gradually rose out of Sanskrit as from a source or type (**prakriti**), by the natural process of change and corruption which the pure Sanskrit underwent in its adaptation to the exigencies of a spoken dialect. The various modifications of Prakrit are the links which connect Sanskrit with the modern dialects of Hindustan It should be noted that there is a large body of Prakrit (or non-Vedic) literature included under the general term Sanskrit, the older Sanskrit literature being generally specified as 'Vedic.'

IV. *Italic*

- *a* Latin, Oscan, Umbrian, the three dialects of ancient Italy.
- *b* The modern 'Romance' (or 'Romanic') languages, viz Italian, Spanish, Portuguese, Provençal, French, Wallachian, Romansch

V *Keltic*

- *a* Cymric or Armorican, including Cornish, Welsh, and the dialect of Brittany
- *b* Gadhelic, including Gaelic, Erse, and Manx

C North-West European Division —

VI *Slavonic*

- *a.* Lettic— Old Prussian and Modern Lithuanian
- *b* Slavonic Proper—Bulgarian, Russian, Polish, Bohemian, Servian

VII *Teutonic*

- *a* High German (spoken in the upper countries of the Rhine, Main, and Neckar), including Old High German, Middle High German, and Modern German
- *b* Low German (in the Lowlands of North Germany, Holland, and Belgium), including (1) Gothic, Anglo-Saxon, and English, (2) Old Saxon and Frisian, and Dutch
- *c* Scandinavian — Old Norse and Modern Icelandic, Swedish and Danish.

Of these sub-divisions the Asiatic (A) contains most that is ancient in sounds and fabric of language, and fewest strongly-developed individual forms The South-West European (B) stands next in this respect, while the North-West European group (C) shows most individuality of development, and fewest remains of a common stock. The diffusion of this common stock under all these different forms over the Continent of Europe is generally recognised as the result of successive migrations westward from the original home of the Indo-European or Aryan nations in

TABLE OF THE INDO-EUROPEAN FAMILY OF LANGUAGES

(Those above the horizontal line are *dead* languages, those below it living or spoken languages)

ASIATIC		SW EUROPEAN			NW EUROPEAN	
I Indic	*II Iranic*	*III Hellenic*	*IV Italic*	*V Keltic*	*VI Slavonic (and Lettic)*	*VII Teutonic*
Sanskrit Prakrit[1], Pali	Zend Cuneiform Inscriptions	Classical Greek Dialects Ionic, Doric, Aeolic, Attic	Ancient Italian Dialects Oscan, Umbrian, Latin	1 Cymric Cornish (lately extinct)	Old Bulgarian (or[3] Church Slavic) — Old Prussian[4]	1 Old High German 2 Gothic, Anglo-Saxon, Old Saxon 3 Old Norse.
Modern Indian Dialects Hindi, Bengali, Mahratti, etc Gipsy Dialects (Hindu patois)	Modern Persian, Armenian, Kurdish, Afghan[2]	Modern Greek	'Romanic' Languages Italian, Spanish, Portuguese, Provençal French, Wallachian, Romansch	Welsh Breton 2 Gadhelic Gaelic, Erse, Manx	Bulgarian Russian Polish Bohemian Servian — Lithuanian Livonian (or Lettish)[5]	1 German. 2 English, Frisian, Dutch, Flemish 3 Icelandic, Swedish, Danish

---

[1] Prakrit, the provincial corruption of the purer Sanskrit of the educated classes, preserved chiefly in some of the Sanskrit dramas. A Prakrit dialect, Pali, is preserved as the sacred language of Buddhism

[2] The Afghan is by some considered an Indian dialect

[3] The sacred language of the Greek Church.

[4] The language of N E Prussia, extinct for the last 200 years, and only surviving in a short catechism

[5] Spoken in Kurland and Livonia

Central Asia[1] and this being so, the phenomena just noted lead us to infer that the first to separate and lose connection with the parent stock were the ancestors of the nations comprised under group (C), that these were followed by the ancestors of those under group (B), the 'Aryan' proper comprised under group (A) alone remaining East of the Ural Mountains This inference from the phenomena of language is borne out by the geographical position of the different branches of the race If we take a map, we shall find that, as a general rule, the more eastward the position of an Indo-European people, the more traces of what is old and common to other languages of the same family are retained in its language, while the further north-west and west they have gone, the less of what is old and the more new formations does their language retain Nor does the western-most position of certain languages in the group which stands second in order of separation (e g the French, Spanish, and Keltic), interfere with the truth of this general statement, such position being due to special historical causes, e g the spread of the Roman Empire to the Atlantic Ocean, and (in the case of Keltic) the gradual pressure of the Teutonic nations, driving the Kelts further and further westward These Kelts, whom we meet with as the conquerors of Rome under Brennus (B C 390), and 100 years later as the invaders of Macedonia and Greece, and of whom Herodotus speaks as dwelling in the extreme west of Europe[2], apparently in Spain, must have spread into

---

[1] It must, however, be remembered that the evidence of successive order of separation, furnished by the closer relationship of particular dialects, is at the best vague, and the conclusions drawn from them indefinite and uncertain, so far as anything like the establishment of a historical order of separation is concerned If it can be shown that Latin is most closely connected with Greek, it can, on the other hand, be shown that in many respects Greek is most closely connected with Sanskrit and probably all that it is really safe to affirm is that the various dialects of the Indo-European family after a long continued community separated gradually, until under different circumstances they established their respective national independence

[2] Hdt ii 33, iv 49 He speaks of them as *ἔξω τῶν Ἡρακληΐων στηλέων*, and (after a tribe called Κύνηται) *ἔσχατοι πρὸς ἡλίου δυσμέων τῶν ἐν τῇ Εὐρώπῃ* His language is that of a man living on the shore of the Mediterranean, to whom all knowledge of these western countries came from people who had sailed *through* the Straits of Gibraltar, *outside* the so called

Switzerland and Tyrol, and, after occupying Gaul, Belgium, and Britain, were driven by pressure of the Teutons to the extreme north and west of Gaul and the British Islands, where their language has survived to our own day, though gradually disappearing (like Cornish) under the influences of increased communication with the mass of the English-speaking population Some philologists, indeed, take a different view, and maintain that, looking to the *present* distance from the original home of the respective Indo-European nations, the Kelts must have been the *first*, and the Slavonians the *last* to move westward, and that the Slavonians, finding the rest of Europe occupied, were forced to make their new home in its northern and eastern regions This *may* be so, but in the absence of history, language (which has been called 'fossilised history') is our best guide, and language seems to postulate a longer separation from the primitive stock in the case of the Teutonic and Slavonic groups than for any of the others

The following diagram (adapted from Schleicher's 'Compendium') will illustrate the successive migration and bifurcations of the Indo-European family—the separations being indicated by lines striking *downwards*, and the degree of separation or proximity by greater or less deflection from the uppermost line[1] The vertical order of the column to the right hand corresponds to the horizontal order of the previous Table

---

'Pillars of Hercules' For other examples of Herodotus' relative use of terms 'from a Mediterranean point of view,' compare i 6, ἐντὸς Ἅλυος ποτάμου i 74 (of the Halys), ῥέων ἄνω, and an instructive note to the latter passage in Woods' edition ('Catena Classicorum' series)

[1] Schleicher's diagram is possibly open to modification, in respect of the position assigned by him to Keltic He believes in a 'Graeco-Italo-Keltic' period, marked by the division of the *a* sound into *a*, *e*, *o*, and (after the separation of the Greeks) in an 'Italo Keltic' period marked by loss of aspirates, retention of spirants, and loss of the old middle voice, while finally, after separating from the Italians, the Kelts lost the ablative and reduplicated perfect Other philologists, however, connect Keltic with the North European languages, tracing a general analogy (e g in the number of diphthongal sounds, being *four* in Keltic and Teutonic, but *six* in Hellenic and Italic dialects) between Slavonic, Teutonic, and Keltic The arguments on both sides are briefly but clearly stated by Mr Peile ('Introd.' pp. 27, 28, 3rd edition), who inclines upon the whole to Schleicher's view.

tion- of Sansk- , Greek, Latin

On looking down the right-hand column, we find that the three first languages of which any considerable literature re-

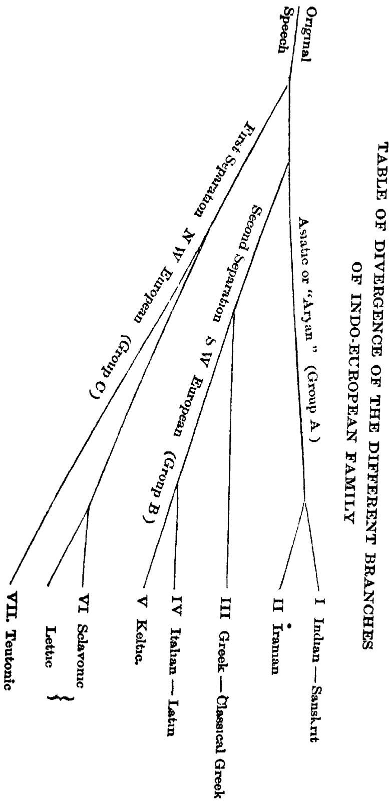

TABLE OF DIVERGENCE OF THE DIFFERENT BRANCHES OF INDO-EUROPEAN FAMILY

Original Speech
Asiatic or "Aryan" (Group A)
Second Separation S W European (Group B)
First Separation N W European (Group C)
I Indian — Sanskrit
II Iranian
III Greek — Classical Greek
IV Italian — Latin
V Keltic
VI Sclavonic
Lettic
VII. Teutonic

mains are *Sanskrit*, *Greek*, and *Latin*, all 'dead' languages, constant changes of spoken languages, and therefore retaining a more complete inflectional system than any other languages known to us, though even in them the inflectional system is already in a state of decay. These three languages thus form the basis of philological enquiry for the Indo-European branch of human speech; and for the illustration of the inflectional system of any one of them, the three together furnish all or nearly all the available data. It is important to understand clearly their relationship, as parallel branches of a common stock, in the same generation of the genealogical tree. They are sisters, or at furthest cousins, and are not in any sense derived from each other. Latin is not *derived* from Greek, neither is Greek or Latin *derived* from Sanskrit, in the sense in which the modern Romance languages are 'derived,' i. e. descended from, classical Latin. This relationship may be proved by internal evidence from any of the languages given in our Table. Thus Greek ἀστήρ, Latin *stella* (=*ster-ula*), German *stern*, English *star*, must be fuller and therefore older forms than Sanskrit **târâ**, in which the initial *s* has been lost[1]. Or again, if we take the grammatical forms, e. g. of εἰμί [Sanskrit **asmi**, Latin *sum*], we shall find that in 1 sing. Latin *sum* retains the *s* of the root *as* (ἐς) which Attic Greek εἰμί has lost; in 2 sing. Aeolic Greek ἐσ-σί is more perfect than Sanskrit **asi**; in 1 plur. Greek ἐσ-μέν retains the full root ἐσ (*as*) as compared with Sanskrit **smas**, while the Latin termination *-mus* (Sanskrit **-mas**) is older than Attic Greek -μεν, the older dialects preserving -μες; in 2nd plur. Latin *estis* is the most complete form, Greek ἐστέ the next, Sanskrit **stha** the most mutilated, having lost both initial and final letter; in 3 plur. Latin *sunt* (Sanskrit **santi**) is fuller than the oldest dialectical form in Greek [ἐντί Doric and Aeolic], from which the root ἐς has entirely disappeared—much more so than the still more weakened form εἰσί. The Teutonic languages retain a correspondingly stronger form than Greek, in German *sind*. French *sont*, Italian *sono*, Spanish *son*, are modifications of *sunt*. A similar comparison of grammatical forms is employed by Professor Max Müller (Lectures, Series I Lect. v), to refute the theory that French, Italian, and Spanish are derived from the Provençal language, which is, according to that theory, the only true 'daughter' of Latin French *sommes*, *êtes*, *sont*, besides Provençal *sem*, *etz*, *son*, are justly pointed to as fatal to such a theory.

---

[1] In the Veda is found a fuller form, **star** or **stri**.

It may be well to subjoin a few specimens of that correspondence between the Indo-European languages which is at once the evidence of their relationship and the basis of their classification into families The evidence is twofold, (*a*) in vocabulary, (*b*) in grammatical structure

(*a*) In vocabulary, it is easy to find in any two of these languages numbers of common words, and to prove them all related by proving each one related with each of the rest in succession—Latin with Greek, Greek with Sanskrit, Slavonic with German, and so on But for words identical in all or nearly all branches of the family, we are restricted to such special classes of words as *numerals* and *pronouns*. These appear to have been less varied by multiplication and substitution of synonymous terms than any other class of words—except, perhaps, the terms indicating degrees of near relationship, *father*, *mother*, *daughter*, *brother*, etc , and hence all the Indo-European nations, however widely separated, and however different in manners and civilisation, count with the same words and use the same pronouns in individual address; allowance, of course, being made for the changes brought about by the phonetic laws of individual languages.

(*b*) Stronger still is the evidence of correspondence in grammatical structure, as shown in a common system of word-formation, declension, and conjugation This portion of language is that which, in the case of intermixture of languages, by the adoption into one language of terms belonging to another, most resists any trace of intermixture. A foreign word admitted to citizenship in another language is declined or conjugated on the system of the language which has adopted it; and the study of language offers no trace of a mixed grammatical apparatus in the same language. This being so, uniformity of grammatical structure in a number of distinct languages must be one of the strongest proofs of their substantial unity.

The table on p 20 exhibits specimens of the correspondence, in vocabulary and inflection, of the Indo-European languages:—

The most familiar illustration of a 'class' of languages, and on the whole the most instructive attainable example of dialectic growth, is to be found in the modern 'Romance' or 'Romanic' languages, so called as being all descended from the 'Lingua Romana,' spoken in the different provinces of the Roman Empire In these we have not only a body of highly cultivated languages, each with its subsidiary dialects, and evidently sprung from a common stock, but we have also, what we have not in the case of the great Indo-European group, the mother language, the 'Ur-sprache,' from which they have all sprung; and we can trace historically, with tolerable accuracy, the processes of change and divarication which have produced them. They all rose about the same period of the Middle Ages, out of the condition of local *patois*, the result of illiterate provincial corruptions of the Latin of ordinary popular pronunciation, which even in classical times had differed in many respects from the literary dialect of Rome, and had degenerated still farther and faster when the decline of literature took away the only check upon arbitrary pronunciation and erroneous grammar. In the provinces upon which the Roman conquerors imposed the use of the Roman language[1], that language was subject in its use to all the innovations produced by ignorance, caprice, or the purely physical causes which dispose the vocal organs of different nations to different sounds. When therefore the various nationalities of modern Europe

---

[1] In Britain, though a Roman province for 400 years, the Roman civilisation was too partial (being confined to the towns) to leave its impress in the use of the Roman language, which in Gaul and Spain survived the conquest of those countries by Teutonic invaders. 'What strikes us at once in the new England,' says Mr Green, 'is that it was the one purely German nation that rose upon the wreck of Rome In other lands, in Spain, or Gaul, or Italy, though they were equally conquered by German peoples, religion, social life, administrative order still remained Roman. In Britain alone Rome died into a vague tradition of the past.' ('History of the English People,' ch. i. sect. ii.)

Table of Correspondence between Members of the Indo-European Family of Languages.

A.—VOCABULARY

	I. Sanskrit.	II Greek.	III Latin.	IV Welsh (Keltic)	V Slavonic		VI Teutonic.					
					Old Slav	Russian	Gothic	Anglo-Sax	German	Dutch	Danish (Scandinavian)	English
Numerals 1	ékas* (eka)	εἷς	unus	un	yedino	odin	ains	ân	ein(s)	een	een	one
2	dvau (dva-)	δυο	duo	dau	dova	twa	tvai	tva	zwei	twee	to	two
3	trayas (tri-)	τρεῖς	tres	tri	tri	tri	threis	thri	drei	drie	tre	three
4	catvâras (catur)	τετταρες	quattuor	pedwar	kētōiriye	cetvre	fidvôr	feover	vier	vier	fire	four
5	pañca (pañcan)	πεντε	quinque	pump	pamtĕ	piat'	fimf	fif	funf	vijf	fem	five
6	shaṭ (shash)	ἓξ	sex	chwech	sestĕ	sest'	saihs	six	sechs	zes	sex	six
7	sapta (saptan)	επτά	septem	saith	sedmĕ	sem'	sibun	seofon	sieben	zeven	syv	seven
8	ashtau (ashtan)	οκτω	octo	wyth	osmę	osm'	ahtau	cahta	acht	acht	otte	eight
9	nava (navan)	εννεα	novem	naw	devamtĕ	deviat'	niun	nigon	neun	negen	ni	nine
10	daça (daçan)	δεκα	decem	deg	desamtĕ	desiat'	taihun	tyn	zehn	tien	ti	ten
nouns -												
pers. (acc. sing)	mâ-m *or* mâ	εμε, με	me		mę	mia, menia	mi-k	(mec) me	mich	mij		me
pers. (nom. sing)	tvâm *or* tvâ	τυ, σύ	tu	tu	ty	tü	thu	thu	du			thou
ords	mâtâ (mâtṛi)	μητηρ	mater	mathair	moter †	mater			mutter	moeder	modhir	mother
	bhrâtâ	φρατηρ	frater	brathair	brotis †	brat	brothar		bruder	broeder	brodhir	brother
	duhitâ	θυγατηρ			dukter †	dochy	dauhtar		tochter	dochter	dottir	daught
	dantah (dat-)	ὀδους=οδοντ ς	dens	dant	danti †		tunthus	toth	zahn	tand	tand	tooth
Root VID (know)	veda (I know)	ϝιδεῖν, οἶδα	video			wiedati	{ wita { wait	wissen	wissen			wit
GNA „		γι-γνω-σκω	gno-sco		znati		kunnan	cnáwan	{ kennen { knau O H G			know
				B —INFLECTIONS [Verbal]		Lithuanian						
erb · 1 sing	ás-mi	εἰμί, ἐσμί	sum	-m	yesmĕ	esmi	im=ismi		(bin)			am
2 „	ási	εσσι	es		yesi	essi	is=issi		(bist)			art
3 „	ás-ti	εστι	est	-d	yestŏ	esti	ist		ist			is
1 plur	's-más	εσμες, ἐσμεν	sumus	m	yesmo	esmi	(sijum)		sind			}are
2 „	'sthá	ἐστε	estis	-d	yeste	este	(sijuth)		seid			
3 „	sánti	ἐν-τι (εισί)	sunt	-t	so*m*tĕ	(esti)	sind		sind			

N.B —In the case of Noun Inflections the correspondence can only be fully traced in those 'dead' languages which are fixed and embodied in their respec
ratures, viz. Sanskrit (and Persian), Greek and Latin (see p 17) The analytical tendency of language has generally speaking, as in English, substituted
ations for inflections, the latter having become so worn down as to be unrecognisable Even German, which has retained more than any spoken languag
' own day its noun inflections, shows symptoms (in the 'new' declension) of a tendency towards uniformity of all case forms except the nominative.

* The base of Sanskrit words is given in brackets.

† Lithuanian words

began to take shape and cohesion out of the chaos of the Middle Ages, the dialects of the Latin-speaking peoples, in what had been Roman provinces, had sufficiently diverged from each other to form the starting-point of so many distinct languages, each with its own national peculiarities, but with strongly marked traces of their common origin—in vocabulary, in inflection, and in grammatical structure — running through them all The following brief summary, given by Professor Whitney ('Life and Growth of Language,' pp. 183, 4), enumerates the Romanic group with sufficient precision —'Fragments of French are the oldest, coming from the tenth century, its literature begins one or two centuries later, the earliest Italian, Spanish, Portuguese, are from the twelfth, or hardly earlier These four are the conspicuous modern members of the group But there was also, in the eleventh to the fourteenth centuries, a rich literature of the chief dialect of Southern France, the Provençal, which, except for a recent sporadic effort or two, has ever since been unused as a cultivated tongue There exists, too, in the northern provinces of Turkey, in Wallachia and Moldavia, a broad region of less cultivated Romanic speech, witnessing to the spread of Roman supremacy eastward · it is destitute of a literature Moreover certain dialects of southern (S and S E) Switzerland are enough unlike Italian to be ordinarily ranked as an independent tongue, under the name of Rhaeto-Romanic or Rumansh' This last is the dialect spoken in the Grisons, and met with by English travellers in the Engadin.

Full materials for the philological study of the Romanic languages are available in the 'Grammatik der Romanischen Sprachen' of Professor Diez[1], than which (says Professor Max Müller) 'nothing can be a better preparation for the study of the comparative grammar of the ancient Aryan languages.' Subjoined is a table (compiled from this work) of comparative forms in the six languages examined by Diez (viz. those above-mentioned with the exception of Rumansch); these languages being placed in the order of (upon the whole) nearest resemblance to the Latin original. The evidence of relationship needs no further comment, and it must be borne in mind that the relationship to each other of the various branches of the Indo-European family is precisely analogous to that of these Romanic languages to each other, and that the evidence for it in the two cases is different not in kind, but only in degree, in proportion as the divarication of dialects has in the one case been wider and longer, and historical observation of their phenomena less attainable

---

[1] A French translation of Diez' Grammar is better arranged than the original, and contains additional matter supplied by Prof. Diez himself and incorporated by the translators.

The transmutation of Latin into its derivative languages, illustrated by the table on pp 24, 25, exhibits certain features of change from 'analytic' to 'synthetic' languages, the germ of which can be traced even in classical Latin. We shall have occasion, in treating of changes and modifications of sounds (chap iv), to notice the course of changes in the form of words, which are constantly at work in every spoken language, and the laws of phonetic change following the universally observed tendency to secure ease in articulation at the expense often of clearness. The formative suffixes of nouns and verbs—*Inflections*—were the parts which were first affected Originally distinct elements with a meaning of their own, and a clear etymological connection with important elements of the language, especially the pronouns, they have become in the language of Cicero and Virgil so far worn away as to appear in many cases mere unmeaning terminations in the written language, and in all probability still less recognisable in popular pronunciation of everyday life This rubbing away of the distinctive suffixes by which grammatical relations were expressed, naturally led to difficulties in retaining the right discrimination, e g. of case and tense, and to substitution of other expedients for expressing such distinctions.

(i.) *Case inflections gave way to prepositions.* This process is gradually at work in all languages, from the earliest stage, which is the richest in inflections. As the *analytical* tendency of language (getting rid of inflections and substituting separate words for each part of a conception) advances, prepositions are more and more developed to give precision to the obliterated forms and extended meanings of case-endings. In Greek and Latin (as the form of many of them indicates) they were originally *adverbs*, serving to define more clearly the meaning which belongs to the case-ending by itself. and as the requirements of language become more complicated, they become more and more necessary to distinctness and accuracy in language. Hence they are often used in prose where they would be omitted in poetry[1]; and it is always the case which determines the meaning of the preposition, not *vice versa*

In modern Greek, and in the derivatives of Latin, prepositions have almost superseded cases, and the growing tendency to use them appears in the New Testament, where they are far more numerous than in classical Greek[2]; and in e g. the practice of the Emperor Augustus[3], who made use of them in order to speak as clearly as possible We are told that he preferred to say 'impendere *in aliquam rem*,' 'includere *in carmine*' (instead of 'alicui rei,' 'carmine') The tendency is found often enough in earlier times, e g '*ad carnificem* dare' (Ter), '*Fulgorem* reverentur *ab auro*' (Virg)

(ii) From the difficulty of retaining distinctions of tense comes the use of active *auxiliary verbs* In the passive voice *sum* was always so employed; and traces of a similar use, e g. of *dare*, are found in phrases like *inventum dabo*, Ter. And. iv. 1 59, *vasta dabo=vastabo*, Virg Aen i 63; ix. 323. *Habere* and *tenere* (*avoir, avere*, Spanish *tengo, tenere*) must have been so used in the provincial speech of the later Empire; we have perhaps an anticipation of this in the classical *expertum, cogni-*

---

[1] e g *ab, ad*, with ablat or accus. of motion, or *ab* with 'ablativus agentis'

[2] e g *ἐσθίουσιν ἀπὸ τῶν ψιχίων*, 'eat of the crumbs,' where classical Greek would employ the 'partitive genitive' alone See Farrar's Greek Syntax, pp 86, 87

[3] 'Praecipuam curam duxit sensum animi quam apertissime exprimere; quod quo facilius exprimeret, aut nec ubi lectorem vel auditorem turbaret et moraretur, nec praepositiones verbis addere, neque conjunctiones iterare dubitavit, quae detractae afferunt aliquid obscuritatis etsi gratiam augent.' Suetonius, 'Vita Octaviani,' lxxxvi.

N B The last words of this quotation recognise the fact that analytic languages gain in accuracy what they lose in conciseness.

TABLE OF CORRESPONDENCE BETWEEN

Words and Forms Compared.		*Latin Original*	I. *Italian*	II *Spanish*
Article	Nom S	ille, -a (used in	il[1], lo (masc), la (fem)	el, la, lo (neut)
	Gen S	late provincial	del, dello, della	del, de la, de lo
	Nom Pl	Lat as Article)	i, gli, le	los, las
Declension.	Nom S	corona, -æ annu s, -i flos, flores	coron-a, anno, fior e	coron a, añ-o, flor
	Nom Pl		coron e, anni, fior-i	coron-as, añ os, flor es
Numerals	1	unus, a	uno, una	uno, una
	2	duo	due	dos, duas
	3	tres	tre	tres
	1000	mille	mille, pl mila	mil
Personal Pronouns	Nom S	ego, tu, ille	io, tu, egli, ella	yó, tu, el, ella, ello
	Nom Pl	nos, vos, illi	noi, voi, eglino, elleno	nos, vos, ellos, ellas
	Gen Pl	nostrum illorum	di noi, voi, loro	de— — — —
Verbs	Pres Indic Sing 1	canto	cant-o, vend o	canto, vendo
	„ 2	canta s	cant i, vend i	canta s, vend-es
	„ 3	canta-t	cant-a, vend e	canta, vend e
	Pl 1	canta mus	cant-iamo, vend-iamo	cantamos, vend emos
	„ 2	canta tis	cant-ate, vend-ete	cantais, vendeis
	„ 3	canta nt	cánt ano, vénd-ono	cantan, venden
	Imperfect	canta bam	cantava, vendéva	cantaba, vendia
	Prete-rite 1 S	canta vi	cantai, vendéi	canté, vendi
	2 S	cantasti	cantasti, vendesti	cant-aste, vendiste
	Plup Subj	cantassem	cantassi, vendessi	cant ase, vendiese
	Gerund	cantando	cantando, vendendo	cantando, vendiendo
	Infinitive	cantare	cantare, véndere	cant-ar, vender
Auxiliary Verbs,	used in active voice	habeo habemus	ho cantato abbiamo cantato	he cantado hemos cantado
	used in passive voice	sum sumus	sono stato siamo state	soy cantado somos cantados

---

[1] il, lo are the two syllables of *ille*.

THE 'ROMANIC' LANGUAGES DESCENDED FROM LATIN.

III *Portuguese.*	IV *Provençal*	V *French.*	VI *Wallachian.*
o (masc), a (fem) do, da os, as	lo, la del, de la li, las	le, la (Old F li) du, de la („ del) les, les	-l, -le (suffixed) a[4] — lui „ i
coro a, anno, flor coro-as, anno s, flore s	coron a, ans, flor-s coron-as, an, flor	couronne, an, fleur couronne s, an s, fleur-s	coron-e, an, floare corone, an-i, flor-i
hum, huma dous, duas mil	uns, una dui, duas trei, tres mil, pl mila	un, une (Old F uns) deux („ dous) trois („ treis) mille („ mil)	un, una (o) doi (doo, doao) trei mie, pl mii
eu, tu, elle, ella nos, vos, elles, ellas de — —, delles, dellas	ieu, tu, elh, elha nos, vos, elhs, elhas de — —, de lor	je, tu, il, elle nous, vous, ils, elles de — —, d'eux, d'elles	eu tu, el, ia noi, voi, ei, ia le al nostru, vostru, a lor
canto, vendo cantas, vendes canta, vende cantamos, vendemos cantais, vendeis cantão, vendia cant-ava, vendia cant ei, vendí cant-aste, vendeste cantasse, vendesse cant-ando, vend endo cant-ar, vend er	chant-i, vend i chant as, vend es chant a, vend chant ám, vend-ém chant-atz, vend-etz chant-an, vénd on chantava, vendia chantei, vendei chant-est, vend-est chant es[2], vend es chant-an, vend-en chant ar, vend re	chante, vend s chant-es, vend s chant-e, vend chant ons, vend-ons chant ez, vend ez chant ent, vend-ent chantais, vend ais chant-ai, vend-is chant as, vend is chant-asse, vend-isse chant ant[3], vend-ant chant-er, vend re	cųnt, vind cųnt-zi, vinz-i cųnt-ę́, vind-e cųnt ęm, vínd-em cųnt-atzi, vind etzi cųnt-ę, vind cųnt-ám, vind eam cųnt-ai, vind-ui cųnt-asi, vind-usi cųnt ásem, vind úsem cųnt-ųnd, vind-ųnd cųnt a, vind-e
tenho[1] cantado temos cantado so cantado somos cantados	ai chantat sui chantatz sem chantat	ai chanté avons chanté suis chanté sommes chantés	am cųntat am cųnt

---

[1] i e. *teneo* Spanish also uses the corresponding *tengo* as an auxiliary.

[2] A fuller form is retained in 2 sing *chantesses*, and in plur.

[3] In phrases like *en voyant*

[4] The preposition before, the article after the noun.

tum habeo. The passive auxiliary construction with *sum*, etc. is obtained by an easy resolution of any tense in that voice but the propriety of the active *habeo* or *teneo* is not so obvious. It may, however, have been extended by analogy from cases in which such analysis was correct to others in which it could not be so employed with strict accuracy.

(iii) Next to these changes, founded on pronunciation and on the substitution of prepositions and auxiliary verbs for noun and verb inflections, the usage of the definite and indefinite article seems the most considerable step in the transmutation of Latin into its derivative languages. The development of the definite article from a demonstrative pronoun, which is seen in the Romanic forms *il*, *lo*, etc, derived from Latin *ille*, took place in Greek at an early period, but within historical observation[1], for we see it beginning in the Homeric poems in the use of the form ὁ as demonstrative, but in certain collocations suggesting its later use as definite article, e g ἡ δ' ἄρ' ἀμείβετο Παλλὰς Ἀθήνη, etc. The Greek language thus gained an important element of precision, and facility for the combination and grammatical handling of abstract ideas, e g. by the article with infinitive or neuter adjective, and though little or no attempt seems to have been made in the literary dialect of Rome to create a corresponding means of precision by an analogous employment of the Latin demonstrative pronoun, there are not wanting signs that the necessity for it was felt and partly acted upon in popular language, by the employment of *ille* and *unus* with the force of a definite and indefinite article respectively[2] Were this not the case, the evidence of the Romanic languages would be sufficient proof that, at all events in the provincial idioms of the later Empire, this usage had become more or less established. The same development of definite article from demonstrative seems to have taken place in the Teutonic languages, for in German *der* (like ὅς, ὁ) is demonstrative, relative, and definite article; and in English *that* and *which* are often interchangeable.

---

[1] On the history and usages of the Greek article see Curtius' Greek Grammar, §§ 365–391, Clyde's Greek Syntax, §§ 3–9 The latter book is a very valuable aid to the student of Greek grammar

[2] The theory of grammarians in this matter seems to have gone contrary to the practice of those who spoke and used the language Quintilian (I Q i. 4. 19) says, 'Noster sermo articulos non desiderat,' and Scaliger called the article 'otiosum loquacissimae gentis instrumentum,' 'articulus nobis est nullus et Graecis superfluus.'

For further suggestions upon the relation of the Romanic languages to Latin, the reader may consult Max Müller's Lectures, Series I Lecture v, and Hallam's Middle Ages, chap. IX. part I

CHAPTER III

CLASSIFICATION OF SOUNDS

THE division of sounds and of the letters representing them in the alphabets of different languages, according to the organs of the human voice by which the sounds are produced, is the basis upon which enquiries into the mutual connection of languages, and all etymology, must ultimately rest In tracing the original form or the common element of words or their inflections in one or more languages, we are retracing the course of 'phonetic change,' the changes i e in the sounds and the letters representing them, by which, while languages are in daily use as media of oral communication, variety or degeneration from simple and primitive forms has been produced The principle of this phonetic change is the endeavour, conscious or unconscious, to secure *ease of articulation* 'All articulate sounds are produced by effort, by expenditure of muscular energy in the throat, lungs, and mouth This effort, like every other that man makes, he has an instinctive disposition to seek relief from, to avoid we may call it laziness, or we may call it economy it is in fact either the one or the other, according to the circumstances of each particular case It is laziness when it gives up more than it gains, it is economy when it gains more than it abandons'

Ease of articulation is secured in the majority of cases by substituting a sound easier to pronounce for one which is found difficult—a *weaker* for a *stronger* sound: and (with some few exceptions) it is a safe rule in etymology that harder sounds are not derived from easier, nor a word which has retained a strong sound from one which exhibits a correspondingly weak sound, nor, therefore, a language in which individual forms retain strong sounds from a language whose corresponding forms retain weaker sounds. Thus (to take a simple instance) such forms as *silva*, *sus*, *video*, *vinum* beside ὕλη, ὗς, ἰδεῖν, οἶνος, go far to prove what has already been demonstrated upon the evidence of inflections (above, p 17), that Latin cannot have been derived from Greek, having retained in these words the sounds *s* and *v* (Ϝ), which Greek has lost, or represents only by an aspirate.

But what are *hard* or *strong*, and *easy* or *weak* sounds? and how is the relative strength of sounds determined? Obviously by the physical conditions of their utterance. *Hard* sounds are those which require greater physical effort on the part of the organs of speech, *easier* sounds those which require less effort. The table given on p 31 exhibits the sounds arranged according to the physical conditions of their production and without a minute investigation of those physical conditions (for which the student is referred to Max Muller's Lectures, Series II Lect. iii on 'The Physiological Alphabet'), a brief statement of them is necessary for the explanation of the terms employed.

The material of speech is breath, i e a continuous stream of air from the lungs, modified by the different positions, or interrupted and compressed by various actions of the uvula, tongue, palate, teeth, and lips, which thus become organs of voice[1]. If the *glottis*, or aperture through which the breath passes from the *trachea* or windpipe, be fully open, what passes into the mouth is mere breath, made afterwards into sound by the organs of the mouth. If however two ligaments at the sides of the glottis, called *chordae vocales,* approximate to each other so as to narrow the glottis, and vibrate as the breath passes through, this vibration changes the breath into *voice*—makes it vocal sound And according as mere breath, or vocal sound, is emitted from the windpipe, the same position of the organs of the mouth gives a different result If it be only *breath* that is checked or modified by their contact or approximation, the sound produced will be what is variously called *tenuis,* 'hard' or 'surd.' if, on the other hand, *voice* or vocal sound be checked by contact or approximation of the organs, the sound produced will be *media,* 'soft' or 'sonant.'

---

[1] For a fuller description of the instruments of the human voice, see Max Müller's Lectures, Series II Lect iii (pp 109–114, 2nd ed), and Farrar's 'Chapters on Language,' ch vii. pp 84, 85 'When we are speaking we are in reality playing on a musical instrument, and a more perfect instrument than ever was invented by man' 'The larynx, with its cartilages and muscles, forms, in point of fact, a combination of musical instruments, it is at once a trumpet, an organ, a hautboy, a flageolet, and an Aeolian harp. The air passing upwards and downwards through the larynx and trachea forms its analogy with the wind-instruments, the vibration of the *chordae vocales*, its resemblance to the stringed' See also Dr. Carpenter's 'Animal Physiology,' p. 528, Whitney, 'Life and Growth of Language,' ch. iv. p. 59; Sayce, 'Introd.' I. ch. iv (on Phonology and Sematology).

Sounds are divided generally into *Vowels* and *Consonants.* The physiological difference in their formation is as follows:—

Modification of the stream of vocal sound, without interruption or compression by the organs of the mouth, produces *Vowels* (*vocales, φωνήεντα*), so called because they have a sound of their own, being various modifications of the vocal sound produced by the 'chordae vocales.' All vowels, therefore, are 'soft' sounds.

Interruption of breath or voice by complete contact, or compression by approximation of the organs, produces *Consonants* (*con-sonantes, σύμφωνα*), so called because they have no sound of their own, but must be accompanied with a vowel sound[1]. (Thus, in the Sanskrit character the vowel *a* is never written after a consonant, because *a,* the primitive vowel sound, is supposed to be inherent in every consonant.) Consonants are either 'soft' or 'hard,' *tenues* or *mediae.*

The subjoined table illustrates the classification of Sounds as applicable to Greek and Latin.—

(The Greek and Latin characters are given.)

---

[1] The Arabic Grammarians call a vowel *motion,* and a consonant *a barrier,* because in forming vowels the voice is not interrupted, whereas in forming consonants it is stopped at certain fixed positions.

TABLE IN ILLUSTRATION OF THE CLASSIFICATION OF SOUNDS

	MUTES 'Explosive' Sounds		Aspirate Tenuis	Nasals	SEMIVOWELS 'Fricative' Sounds			VOWELS.	
	Tenuis	Media.			Spirants		Liquids	Primary	Secondary
					Tenuis	Media.			
Guttural	κ c k q	γ g	χ	γ[1]	ʽ h	ʼ		α a	ε η e ο ω o
Palatal						ι (j)		ι i	
Dental	τ t	δ d	θ	ν n	σ s	ζ z	λ ρ l r		
Labial	π p	β b	φ	μ m	f	Ϝ v		υ u	

(*f* and *v* are sometimes classed separately as 'Labio-dentals,' being formed by contact of under lip and upper teeth.)

N.B. In Latin, *c*, *g* represent the hard sound of κ, γ · *i* (*j*) semivowel, the sound of English *y* in *you* *v* (and Greek Ϝ) that of English *w*.

The vowels in Greek and Latin are pronounced nearly as in Italian. (Cp the table of the Greek and Roman alphabets, p. 42.)

[Sanskrit, besides the sounds expressed in Greek and Latin, has letters expressing—

'Palatal' mutes, ten and med. [c ch], spirant [ç]; nasal [ñ]
'Cerebral'[2] „ „ „ [ṭ d], „ [sh]; „ [n]

(These sounds are varieties of guttural and dental respectively.)

A complete set of aspirated mutes, tenues, and mediae; e.g. **kh, gh; ch, jh**, etc.

Short and long sounds of all the vowels, + the dental vowel sounds **ri, li**.]

---

[1] e.g. in ἐγγύς, ἄγγελος.

[2] Also called 'Cacuminal.'

Consonants are classified[1] (see the Table, p. 31)—

I. By the completeness or incompleteness of contact of the 'vocal organs.'

a. Mutes (*ἄφωνα, mutae*), where there is a complete interruption of the passage of the breath or vocal sound. These are '*Consonants*' proper, having no sound of their own, and depending for articulation upon the vowel sound which follows when the stream of breath or vocal sound is released from the 'check' or interruption. They are sometimes called 'Momentary' or 'Explosive' sounds [*k g, t d, p b*].

b. Semivowels[2] (*ἡμίφωνα, semi-vocales*), where the stream of vocal sound is not interrupted by complete contact, but only compressed by approximation of the 'vocal organs,' so that a continuous sound is heard from the friction of the breath or vocal sound against the partially closed organs. They are sometimes called 'Continuous' or 'Fricative' sounds [*s, z, l, r, f, v*, etc.]

II. By the accompaniment or absence of vocal sound. (See above, pp. 29, 30.)

a. Tenues[3] (*ψιλά*, 'voiceless' also called 'sharp,' 'hard,' 'surd'), when the contact or approximation of the organs takes place with the *vocal chords* (see above, p. 29) wide apart, so that only a whisper takes place [*k, t, p, s, f*].

b. Mediae[4] (*μέσα*, 'voiced,' also called 'flat,' 'soft,' 'sonant'), when the contact or approximation of the organs takes place with the *vocal chords* close together and vibrating so as to cause sound[5] during the approximation or contact [*g, d, b, z, v*, etc.]

---

[1] The teacher will find the comprehension and recollection of these classifications and the terms employed much facilitated by oral illustration, pronouncing himself, and asking his pupils to pronounce, each sound as it is mentioned.

[2] For the more limited use of this term, see below, p. 35, note 2.

[3] *κ, τ, π* were called *ψιλὰ γράμματα* ('bald,' 'slight,' or 'thin letters') by the Greek grammarians in distinction from the *aspirates* *χ, θ, φ*, which had a rough or shaggy sound. Hence *ψιλῶς γράφειν* = to write with a tenuis instead of an aspirate (*ῥάπυς* for *ῥάφυς*), Ath. 369 B.

[4] The *mediae* (*μέσα*) *γ, δ, β* were so called because they were pronounced by the Greek grammarians with more aspiration than the *tenues* and with less than the *aspirates*.

[5] On the general causes of the distinction between *tenues* and *mediae*,

III By the part of the mouth at which, and the 'vocal organs' between which the contact or approximation takes place

a *Guttural*, by the back or soft palate (uvula) and root of the tongue [*k*, *g*]

b *Palatal*[1], by the middle or hard palate and the tongue (i e. the guttural 'check' or contact pushed a little further forward)

c *Dental*, by the upper teeth and front part of tongue [*t*, *d*]

d *Labial*, by the lips [*p*, *b*], or under lip and upper teeth [*f*, *v*]. The latter are sometimes classed separately as *Labiodental*

Somewhat outside of I and III come *Nasals* and *Liquids*.

Nasals are a variety of Explosive Mediae i e. when the organs are in position for pronouncing *g*, *d*, *b*, but the stream of breath passes into the nose, *ng*, *n*, *m* are respectively produced Accordingly, if we try to pronounce *n* or *m* either holding the nose, or when it is stopped by a cold so that the breath cannot pass that way, the result is the original sound of *d* or *b*, e g *moon* becomes *bood*[2]

Liquids ('lingual' sounds or 'trills') are caused by the breath passing over the sides of the back of the tongue [*l*], and over the

---

see Prof Helmholtz, as quoted by Max Muller, Lectures, II iii p 131, 2nd ed The terms 'surd,' 'sonant,' adopted by Professor Whitney ('Life and Growth of Language,' p 63) and Mr Sayce (Introd I p 265), are preferable to the more commonly used 'hard' and 'soft,' as being expressive of actual facts

[1] The various consonantal sounds which in Sanskrit and other languages are called *palatal* are formed by placing the tongue in a position intermediate between the guttural and dental contact, and are modifications, sometimes of gutturals, sometimes of dentals In Sanskrit they approach nearer the former, and are often represented, the tenuis by English *c*, *ch* (in *church*, or Italian *cielo*), the media by *j* (i e as in our pronunciation of *German*, *George*) Many Sanskrit scholars, however, prefer to denote the palatal series by the guttural signs, *k*, *kh*, *g*, *gh*, modified either by ' (k', k'h) or by difference of type (**k**, *k*, **g**, *g*), because this helps them to show the easy transition between e g nom वाक् (vâk) and वाच (vâc) the stem of the oblique cases

[2] The following stanza from a *jeu d'esprit*, entitled 'The Lay of the Influenzed,' may serve as an illustration of this —

'Dever bore bedeath the bood
Shall byrtle boughs edtwide,
Dever bore thy bellow voice
Bake belody with bide'

This is incorrectly termed 'speaking through the nose' A person who has a cold ought to speak through his nose, but cannot do so, in pronouncing *m* or *n* and therefore he sounds nearly *b* or *d* in attempting to pronounce the nasals *m*, *n*.

tip of the tongue [*r*] They may be classed with Semivowel [Fricative] sounds, to which they have most affinity

Aspirates are variously classed with 'explosive' and 'fricative' sounds The sound denoted by *h* (*spiritus asper*[1]) is a mere expulsion of breath[2], unchecked by the vocal chords, which remain wide apart without vibrating so as to produce vocal sound This 'breathing' (to adopt the term familiar in Greek grammar), when it follows an explosive consonant, gives such sounds as Greek χ ($k+h$), θ ($t+h$), φ ($p+h$) In pronouncing the tenues *k*, *t*, *p*, the vocal chords are apart and in a natural position for aspiration but with the mediae *g*, *d*, *b* they are close together, and not in position for aspiration Hence *gh* ($g+h$), *dh* ($d+h$), *bh* ($b+h$) are more difficult sounds, which perhaps existed in the earliest forms of Indo-European speech, but have only found expression in the Sanskrit and (to a certain extent) in the Keltic languages

The slight sound or 'breathing' heard before any vowel, and best caught when two vowels come together (e g *go over*), is rarely expressed by any sign, except in Greek by the *spiritus lenis* or 'soft breathing'

If the breath emitted for *spiritus asper* or *lenis* be modified by certain narrowings of the mouth forming barriers which hem it in, various distinct sounds are produced Eight such 'barriers,' with corresponding modifications of the *spiritus asper* and *lenis*, are enumerated by Professor Max Muller, of which only those for which signs are given in our table of sounds are here given, viz

---

[1] The distinction between *spiritus asper* and *lenis* is regarded by Prof Max Muller as that which is denoted in consonants by the terms *tenuis* and *media*, the glottis being in one case open, in the other closed The Greek terms are πνεῦμα δασύ ('rough breath'), and πνεῦμα ψιλόν (breath free from roughness—a merely negative definition)

[2] Others, however, regard *h* as a genuine consonant, produced very near the glottis, so that it combines very readily with a following vowel, and seems to be produced in the same act of enunciation Mr Peile, holding this view, thinks 'that there may be a soft *h* which differs from the ordinary *h* almost as much as any soft consonant from the corresponding hard, and that this soft *h* differed infinitesimally (if at all) from the breath heard after the momentary sound in the original aspirates (*gh*, *dh*, *bh*)'—'Introduction' pp 60-73.

1 The barrier produced by advancing the tongue towards the teeth modifies *spiritus asper* into *s*, *spiritus lenis* into *z*.

2. If the lower lip be brought against the upper teeth, the barrier produced modifies *spiritus asper* into *f*, *spiritus lenis* into *v*, as heard in English *live*, *halve* Hence *f*, *v* are sometimes called 'Labio dental' sounds

3 If the lips be slightly contracted and rounded, *spiritus asper* becomes *wh* in *wheel*, *which*, *spiritus lenis* the English *u*, which is apparently represented by Greek Ϝ and Latin *v*

These sounds, *s*, *z*, *f*, *v*, etc , are called *spirants* This name and the physical fact which it denotes (that the sounds so called are modifications of the 'breathings'), will at once suggest the explanation of such phonetic varieties as *sedes*, ἕδος, *sus*, ὗς, *sub*, ὑπό, or the correspondence of Latin *f* to various aspirate sounds in Greek, e g to φ, χ (χολή, *fel*), to θ (θῆλυς, *femina*, θήρ, *fera*), and to ʽ, originally Ϝ, in ῥιγέω, *frigus*

VOWELS AND DIPHTHONGS[1].

1 The three primitive vowel-sounds are *A*, *I*, *U*, (pronounced as in Italian) Of these *a* is formed nearest to the *guttural* point of contact (with the lips opened wide), *i* nearest to the *palatal*, *u* nearest the *labial* contact, the lips approaching each other

i and *u* pass into the cognate consonantal (or semivowel[2]) sounds of *y* and *v* (*w*)

a can pass into no cognate consonantal sound it is *the* vowel *par excellence*, occurring in Sanskrit[3], and probably in the earliest form of Indo-European language, much oftener than *i* or *u*

---

[1] For a more elaborate analysis of vowel sounds than appears necessary to give here, see Peile Introd pp 90–100 (3rd ed) also Bell, 'Principles of Speech,' and 'English Visible Speech for the Million'

[2] 'Semivowel' is here used in the limited sense, which often attaches to it, of the consonantal sounds of *i*, *u* The reader will take note that it has been applied above (p 32) in a wider sense to the whole class of 'Fricative' consonants, as distinguished from Mutes or Consonants proper To avoid confusion it would be better either to describe the *y* and *w* sounds as *i* and *u* consonantal, or to give up the wider application of the term to Fricative consonants, but the inconsistency of usage is too confirmed

[3] In Sanskrit *ă* following a consonant is never written, because it is supposed to be inherent in every consonant (e g **patara** is written **ptr**); and the Sanskrit alphabet, which has two separate characters for each vowel-sound according as it is initial or in the middle of a word, has no character for ă medial

2. *E* and *O* are phonetic variations of the *A* sound[1]. If we compare kindred words in Sanskrit, Greek, and Latin, we find that Sanskrit **a** is represented by α, ε, ο in Greek, by *ă*, *ĕ*, *ŏ*[2] in Latin, e g Sanskrit **navas**, Greek νέ(ϝ)ος, Lat *novus*=(*novos*), **pitā(r)**, πατήρ (=πάτερ-ς), *pater*; **bharāmi**, φέρω (=φέρω-μι), *fero* In some cases the variety secured by this weakening of *a* has been turned to account, to indicate differences of meaning, thus Sanskrit **padas**, which is gen sing. and acc plur of **pad**, a foot[3], becomes in Greek ποδός, πόδας, the Greek thus gaining in distinctness what it loses in strength of sound

3 When two vowels follow one another so rapidly as to melt into one sound we get a *diphthong* Of the primary vowels *a* alone can thus form the basis of a diphthong, for *i* and *u*, if a vowel-sound follows, pass into the 'semivowel' sounds of *y* and *v*. *e* and *o*, being varieties of *a*, can also serve as 'diphthongal bases' We thus get as diphthongal sounds, in Greek αι, αυ, ει, ευ, οι, ου, in Latin *ai*, *au*, *ei*, *eu*, *oi*, *ou* though, for reasons which will appear afterwards, the Latin diphthongs, with the partial exception of *au* and *eu* in a few words, became weakened to the simple sounds *æ* (*ē*), *ō*, *ī*, *ū*, *œ* (*ē*), *ū*, and we must go back to the archaic remains of the language for such forms as *aidilis*, *deicere*, *foidus*, *joudex*

4 Another vowel-sound is sometimes added, viz the indefinite or neutral sound ('original vowel,' 'Ur-laut,' 'Ur-vocal'), variously defined as 'the natural vowel of the reed,' 'the voice

---

[1] The Indic single vowel *ă* is supposed by some philologists to be the result of a coalescence of three primitive vowel sounds, which are denoted (e g by Brugman) by the symbols a^1, a^2, a^3 See Sayce, Introd i p 309

[2] The vowels are originally *short* in quantity (as e g in most roots), lengthening being generally the result of 'vowel intensification,' as in *dūco* (root *dŭc-*), or contraction, as *amās*=*ama is* Vowels which are *naturally* long must be distinguished from vowels which are *naturally* short, but long by position, e.g *ārma* (*ă*), *nōx* (*ŏ*) In speaking of vowel-sounds generally we mean (unless otherwise specified) *ă*, *ĕ*, *ĭ*, *ŏ*, *ŭ*

[3] The accent and quantity of the stem vary in Sanskrit, (**padás, pádas, pádas**), and the vowel was perhaps modified in pronunciation (see note on 6) Accent in Sanskrit is only marked in the Vedas, but it is sometimes desirable to mark it in transliteration, for the light which it throws upon Greek accentuation See, for instance, Max Müller, 'Selected Essays,' [illegible] **and below, chap. vi, on the Vocative Singular,**

in its least modified form,' etc This is the sound heard in such words as *but*, *dust*, and it has been said that in such words as e g *spurt*, *assert*, *bird*, *fatal*, *dove*, *oven*, *double*, *blood*, but one and the same indefinite vowel-sound is heard. However this may be, there is no doubt an indefinite sound to which *unaccented* vowels in most modern European languages have a tendency to return, e g in the last syllable of *beggar*, *nation*, *Paddington*, German *lieben*, or the first syllable of French *tenir* Physically, it appears to result from leaving the tongue in its most natural position, opening the mouth easily and emitting vocal breath, and it approaches the sound of all the vowels. It is this indistinct vowel, combined with *r* and *l*, that produces the Sanskrit vowel-sounds *ri* and *li* (ri, li)

It should be borne in mind that *sounds* are distinct from the signs used to represent them, i e the *letters* The number of possible articulate sounds is greater than any nation ever employs, and the 'alphabet' of some languages will express sounds which that of others does not Again, the use of letters in time reacts upon sounds They do not always fit each other exactly to start with, and while pronunciation is always changing, spelling in a literary language becomes more or less fixed Thus in time letters become symbols of other sounds than those proper to or originally denoted by them, and carry their new sounds into other words or other languages For example, in the Roman alphabet, which is common to most nations of modern Europe, *c*, *g* representing to a Roman of the classical period the hard sound of *k* or Greek γ[1] before *all* vowels, in the pronunciation of the later Empire and in the languages of modern Europe came to signify different sounds before the vowels *i*, *e*, and these new sounds are carried back by each nation into their pronunciation of classical Latin, leading to such anomalies as the identical pronunciation of *secus* and *caecus*, or the different pronunciations of *locus*, *loci*, *loco*, parts of the same word. Again, *j* and *v* in Latin, the modern representatives of consonantal *i* and *u*, have acquired, and carry back with them into the modern pronunciation of consonantal *i* and *u* in Latin words, quite different sounds from those of our *y* and *w*, which are in reality much nearer representatives of the sounds in question Whatever, therefore, may be the practical value to modern nations, in reading or pronouncing a dead language, of attempts to reproduce the ancient pronunciation, it is of the utmost importance, for philological and etymological enquiry, to realise as accurately as we can *what sounds*, in the mouths of those who spoke the Greek and Latin languages, are represented by their written character, and this not only for the philology of those languages, but for that of all the modern languages which, as we have seen, are connected with them

---

[1] The evidence for this statement as to the pronunciation of *c*, *g* will be found summarised in Roby's 'Latin Grammar,' vol. i Preface, pp xliii–lii, or Wordsworth's 'Fragments and Specimens,' Introd. ch. iii §§ 22–28.

The only people who have ever attempted to express in their written character almost every known gradation of sound are the Hindús, those who employed the Sanskrit language The Sanskrit alphabet has fourteen vowels, each (except ǎ) with two symbols, one initial, the other medial; thirty-three simple consonants, and upwards of 400 or 500 compound consonants, of which 133 are given in Professor Monier Williams' Sanskrit Grammar as 'the more common' of such consonants· while Prof Max Müller (Sanskrit Grammar for Beginners) specifies 257 compound consonants Sanskrit, in fact, in its whole structure, is an elaborate process of combining letters according to fixed rules 'Its entire grammatical system, the regular formation of its nouns and verbs from simple roots, its theory of declension and conjugation, and the arrangement of its sentences, all turn on the reciprocal relationship and interchangeableness of letters, and the laws which regulate their internal combination[1]' These laws, too, are the key to the influence which Sanskrit has exercised upon the study of Comparative Philology. That influence is due, not to its being (as is sometimes said) an *older* language—though approaching on the whole nearer to the primitive type whose existence we infer from a comparison of the various branches of the Indo-European family—but to the fact that its elaborate system of phonetic combination of sounds supplies illustrations for the different phonetic rules which determine the variation, in different languages, of the elements common to all. Owing to the transparency of its construction, the nicety of its laws and its great antiquity in many respects, and especially that of its vowel system, Sanskrit was soon found to be more adapted than any other language to open men's eyes to the nature of the connection of all the sister languages: and in the first rejoicings of the students of language over its discovery, its importance was for a time overrated. 'The preposterous idea that Sanskrit must have preserved in every case the oldest form' is now however generally discarded, and those philologists whose labours rest upon the most thorough knowledge of Sanskrit, are the first to allow that even in its sounds there are weaknesses and corruptions peculiar to it which prevent it from serving in all cases as the starting-point for comparison, and even send us to other languages to recover the primitive form. Thus (to quote the remark of Curtius[1]), 'now that this language has for a long time served exclusively to throw light on others, the light begins to shine back from the other languages upon Sanskrit.' With this limitation, however, the pre-eminence of Sanskrit as the central point in the study of Comparative Philology may remain accepted, for (to quote again from Professor Curtius), 'the exuberance of the old Indian literature, the antiquity of its most revered monument the *Rig-veda*, the perfection of its alphabet, the remarkable acuteness and diligence of its native grammarians, who have prepared the most valuable assistance for the study of Etymology, if only by their discovery of the conception of roots and their careful index of roots, all these are claims on the part of Sanskrit, which only during the last half-century has become the field of such fresh and important investigations, to retain permanently the prominent position of importance for the study of the whole Indo-Germanic (Indo-European) stock of languages[2].'

---

[1] Monier Williams' 'Sanskrit Grammar,' Preface to 2nd ed. p. xv.

---

[1] 'Principles of Greek Etymology,' Introd. § 5 (p. 37, English translation).

[2] Ibid. p. 30.

Appendix to Chapter III.

THE GREEK AND ROMAN ALPHABETS.

A *Greek Alphabet* It is universally admitted that the Greeks learnt the art of writing from the Phoenicians, with whom, as the chief traders of the Mediterranean, they were brought into contact at an early epoch of their national history In adopting the Phoenician alphabet they seem to have retained both the forms and the names of its letters, slightly modified, in the order in which they originally stood, the Semitic terms, Aleph, Beth, Gimel, etc, being transformed into names more euphonious to Greek ears, but of course unmeaning except as signs These names, through the influence of Greek civilisation, have become identified with the practice of writing in all ages and countries, and the word 'Alphabet' (from the first two Greek letters, Alpha, Beta) is a lasting memorial of the obligations of modern literature and science to primitive Oriental ingenuity The old explanation, that the name of each letter was the name of some familiar object, the first sound of which was the element to be represented, *Aleph* (*A*) being Phoenician for 'ox,' *Beth* (*B*) for 'house' (cp Beth-el='House of God,' Beth-horon, etc, familiar to us from the Bible), *Gimel* (*G*) for 'camel,' etc, is now discredited, and the Phoenician alphabet is no longer regarded as the *ultimate* source of the world's alphabets, but is itself traced back to an Egyptian source, being in its origin hieroglyphic[1]

The names of the letters were but little changed either in Greece or the East, though their forms must have undergone some alteration. The original community of form between the classical Greek characters and the later Phoenician may be traced in the older inscriptions of the two languages. The whole Phoenician alphabet of twenty-two letters was adopted by the Greeks with certain variations of power and order, as appears from the subjoined table[1], in which column I give the Phoenician alphabet, as a representative of sounds, and as a numeral system (this latter usage being also adopted by the Greeks), column II, the whole number of letters ever used by the Greeks in their earliest forms (twenty-one Phoenician, in their original order[2], and five of native Hellenic invention), column III, the classical Greek alphabet, column IV, the corresponding numeral system, column V, the Roman alphabet, with the probable pronunciation of its different letters

---

[1] See especially Lenormant, 'Introduction à une mémoire sur la propagation de l'alphabet Phénicien dans l'Ancien Monde' (published 1866).

The old Phoenician alphabet consisted only of consonants, the pure vowel-sounds (like ă medial in Sanskrit, p 35, note 3), being considered as subordinate aids to pronunciation, and included in the power of each consonant In Greek etymology, however, the vowels were of almost equal importance with the consonants; and required to be as exactly distinguished as these, in a language which depended so much upon poetry and music for its full formation. But for this purpose they had not to invent altogether new characters, for several of the letters of the Phoenician alphabet, though technically classed as consonants, were more properly semivowel in character, and were appropriated by the Greeks to denote the vowel-sounds to which they had respectively affinity These letters were Aleph, He, Jod, Oin, which were adopted as the simple vowel-sounds *A*, *E*, *I*, *O*,

---

[1] For the general plan of this Table, and some of the information about the Phoenician alphabet, I am indebted to Col. Mure's 'History of the Language and Literature of Ancient Greece,' Book I ch iv § 8 The information about the Greek alphabet is derived from Kirchhoff's exhaustive little treatise, 'Studien zur Geschichte des Griechischen Alphabets' (Berlin, 1867), that on the Roman alphabet mainly from Corssen

[2] The Rev Isaac Taylor, in his interesting volume 'Greeks and Goths' (Macmillan, 1879), an enquiry into the origin of the Runes of the Gothic 'Futhorc,' gives a table (p 54) showing three successive types of the Greek alphabet 1 'Cadmean,' obtained mainly from inscriptions at Thera and Abousimbul, 2 'Thracian,' from Thracian coins, pottery at Thasos, and inscriptions at various cities in the Aegean and Greece proper, being the alphabet in use during the fifty years preceding the Persian invasion, 3 'Attic,' the standard alphabet of the fifth and subsequent centuries—the 'Thracian' alphabet being the parent of the Runes Whenever the 'Cadmean' differs from 'Thracian' forms, both are given in col 2, of our Table on p. 42.

TABLE SHOWING THE CORRESPONDENCE BETWEEN THE PHOENICIAN, GREEK, AND ROMAN ALPHABETS.

I Phoenician Alphabet and Numerical Value	II Full No of Greek Letters (earliest form [1])	III Classical Greek Alphabet	IV Numerals corresponding	V Roman Alphabet	
				Characters	Probable Pronunciation
1 Aleph = 1	Alpha A	A	1	A	*ah*
2 Beth = 2	Beta B	B	2	B	*b*
3 Gimel = 3	Gamma ᛚ Γ	Γ	3	C = K	*k* (*c* in *cat*)
4 Daleth = 4	Delta ᐅ Δ[2]	Δ	4	D	*d*
5 He = 5	E ⴺ E	Ε ψιλον	5	E	*ay* (*a* in *whale*)
6 Vau = 6	Vau F		6 (ς′)	F (older ᛁ')	*f*
7 Zain = 7	Zeta I	Z	7	(G)	*g* (in *give*)
8 Heth = 8	Heta H 日	H	8	H = ʽ	*h* (in *hat*)
9 Teth = 9	Theta ⊗	Θ	9		
10 Jod = 10	Iota ≀	I	10	I vowel I consonant	*ee* (in *feet*) *y* (in *yes*)
11 Kaph = 20	Kappa K	K	20	(K)	*k*
12 Lamed = 30	Lambda V Λ Λ	Λ	30	L (old ᒪ)	*l*
13 Mim = 40	Mu M	M	40	M	*m*
14 Nun = 50	Nu N	N	50	N	*n*
15 Samech = 60	Sigma ⊞	Ξ	60		
16 Ayin = 70	Ŏ O	O μικρόν	70	O	*o*
17 Pe = 80	Pi Γ	Π	80	P (Γ inscr)	*p*
18 Tsade = 90	M				
19 Koph = 100	Koppa Ϙ		90 (Ϙ)	Q (old Ϙ)	*k*
20 Resch = 200	Rho R P	P	100	R (old R)[3]	*r*
21 Shin = 300	Xi Σ	Σ	200	S	*s*
22 Thau = 400	Tau T	T	300	T	*t*
	Υ Y V	Υ	400	V vowel	*oo* (in *fool*)
	Phi Φ	Φ	500	V consonant	*w*, or Fr *ou* in *oui*
	Chi Ψ Ψ X	X	600	X = Ξ	*x*
	Psi (caret)	Ψ	700	(Y)	later introductions to represent Gk υ, ζ
	Ō Ω	Ω μέγα	800	(Z)	
			900 (ϡ)		

---

[1] The Greek characters are originally the Phoenician characters reversed to suit the mode of writing from left to right, which in Greece superseded the earlier right to-left ('links läufig') writing of the Phoenicians. Examples of this latter method are found in the oldest Greek inscriptions, while in those of the sixth century B C is found a mixture of the two modes ('furchenförmig' or 'ridge-like') in which the writing is read backwards and forwards in alternate lines, e.g.

ΙΣΤΙΑ i e. 'Ιστια(ῖος)
ΩΤƎꓘΗ (ἀνέθ)ηκε τῶ-
ΠΟΛΛΩ -πόλλω(νι)

while Vau, which, on analogy of the others, should have been converted into *U*, retained its original power, as the expression of the consonantal sound of *U*, though it may have served originally for both vowel and consonant sound A new sign Y or V, expressing the vowel-sound of *U*, took its place at the end of the twenty-two Phoenician letters. No known Greek alphabet, however, is without this sign, or has less than twenty-three letters The invention, therefore, and adoption of V was probably contemporaneous with the adoption of the Phoenician alphabet and we may regard the original Greek alphabet as consisting of twenty-three letters, identical with that which appears on the oldest inscriptions of Thera and Melos (circ 620 A C) The Vau (better known under its later name of *δίγαμμα*, from its form Ϝ) did not long remain in use, its form being only known to us from early inscriptions It reappears, however, in the Latin F, occupying in the Roman alphabet the place of Vau in the Phoenician, but denoting a different sound

These five vowel-characters at first denoted both the long and short vowel-sounds, E and O having besides the functions of the diphthongs *ει*, *ου*, which were not until comparatively late times expressed by combinations of simple vowel-characters Much earlier, before about 620 A C, the attempt was made to distinguish long and short *e* by the adoption of a sign 8 for *ē*, E remaining for *ĕ* and *ει* This sign 8 was apparently a modification of the Phoenician ⊟ (Heth, Hebrew 'Cheth'), which in its open shape H was used to denote the *spiritus asper* It is also found in the closed shape ⊟ as aspirate on some early inscriptions discovered at Olympus HOΣ occurs on inscriptions = *ὅς*, and H stands for *ἑκατόν* and this usage of course survives in Latin *H*. When H was taken as a vowel, it was cut in two so that ⊢ represented the *spiritus asper*, ⊣ the *spiritus lenis*, whence came the signs ' ' for the breathings

Somewhat later (according to Kirchhoff, about 550 A.C) arose the distinction between *ō* and *ŏ*, by the introduction of a new character Ω[1], which took its place at the end of the alphabet, after three new characters expressive of double consonantal sounds. The names O *μικρόν*=*ŏ*, and Ω *μεγά*=*oo* or *ō*, were given after this to distinguish what had hitherto been combined in one form The character *ω* (i e *oo*), introduced about Hadrian's time, made its form, like its sound, a lengthened *o* (cp our *w* or 'double *u*')

---

[1] Ω and H were introduced into the *Athenian* alphabet in 403 B.C (archonship of Eucleides) but their invention must be placed much further back.

The Phoenician *Teth*=*t* sound, and *Thau*=*th*, were retained in their places by the Greeks, but their respective powers were interchanged, and the names slightly altered to correspond, *Teth* becoming *Theta* and representing the aspirated *t*, and *Thau* becoming *Tau* for the unaspirated tenuis

The Phoenician alphabet was remarkable for its number of sibilants—viz Nos 7 (I), 15 (⊞), 18 (M), 21 (Ʒ)[1] I (in its later form, Z) was adopted at first to denote the double consonant sound of *τs* or *δs*, peculiar to Greek, and retained thus its original force throughout To express the simple sibilant the Greeks had the three remaining characters to choose from. At first it was denoted by M (in the alphabets of Thera, Melos, Crete, Corinth, Corcyra, &c, Olymp 40–80), then by Σ, or (written in a shorter form) ᛊ, whence the Latin form *S* The superfluous character M then disappeared from the alphabet, but the later form of 𐤌 (Phoen alph 13) exactly resembled it in shape hence the apparent anomaly of the same form denoting at different periods such unconnected sounds as *s* and *m*. The remaining character ⊞ escaped extinction, because the Ionic alphabet, which finally prevailed in Greece, had employed it (as ⌶) to denote the compound sound *κs* (*ξ*) A later form still of Σ (sigma) was Ϲ, whence in late authors the orchestra is called *τὸ τοῦ θεάτρου σίγμα*, and *sigma*=a semicircular couch (Martial, x 48, etc) [The Latin form *S* arises from the attempt to write ᛊ in a single stroke. In the classical alphabet it has interchanged places with Ξ.] We also hear of *σάν*[2], a Doric form of *σίγμα*, which only remained as a numeral=900, under the name *σαμπί*, in the form

---

[1] The numbers refer to the Table on p 42

[2] Herodotus (i 139), speaking of the Persian names, says they all end in the same letter, *τὸ Δωριέες μὲν Σὰν καλέουσι, Ἴωνες δὲ Σίγμα* *σαμφόρας* (Ar Eq 603, Nub 122, 1298) is a horse marked with the old letter *σάν*, cp *κοππατίας ἵππος*, Nub. 23. Col Mure assumes *σάν* to have been derived from the Phoenician *Zain*, and places it in col II of his table between *Vau* and *Heta*, supposing that the Dorian usage of *σάν*=*σ* alluded to by

Koppa, Ϙ, disappeared from the classical Greek alphabet, its sound being so like that of κ, that one sign sufficed for both. It remained however as a numeral=90, and is found in old Doric and Aeolic inscriptions and it survives in *Q*, which the Romans adopted from the Dorian alphabet of the Greeks of Cumae

Xι was originally written ΧΣ (*chs*) The original Greek alphabet had no sign for the guttural and labial aspirates (*kh*, *ph*), nor for those combinations of a mute with a following sibilant (*ks*, *ts*, *ps*) which seem to have been regarded by the Greek ear as single indivisible sounds, requiring a corresponding expression in writing The dental aspirate was from the first expressed by Θ (⊗ ⊕ ○), and the Phoenician character Ɪ in its later form Z was, as we have seen, adopted as the sign of dental mute + sibilant (*ts*). The other combinations, *πh*, *κh*, *κs*, *πs*, are expressed on the oldest inscriptions by juxtaposition of the signs for their component parts but the range of the alphabet was afterwards increased by three new signs, Φ, X (+), Ψ (Ψ), which took their place after V Their introduction must have been early, for no alphabet but those of Thera and Melos is without them The order, however, and significance of the new signs varied in the two main groups of Greek alphabets Thus (1) in the *Eastern* group (including Argos and Corinth in Greece proper) the order was Φ X Ψ, signifying as in classical Greek *πh*, *κh*, *πs* respectively the sound of *κs* being denoted by Ξ (⊢H), a variety of the Phoenician ⊞ (Samech) (2) The *Western* alphabets put X before Φ, and gave it the value of *κs*, denoting *κh* by Ψ, and using for *πs* the old expression *πs* or *φs*.

This latter usage (of Western Greek alphabets) represents, according to Kirchhoff, the original order of these signs, superseded by the ultimate prevalence of the Ionian alphabet, as exhibited on inscriptions of the Aegean islands. The Roman alphabet, derived from a Dorian source (see below), has pre-

Herodotus was a mere provincial anomaly Liddell and Scott regard it as a 2nd sibilant, which Phoen. *Shin* . : Σ . Samech, served the force of X = *κs* (ξ), and (as a numeral sign only) that of Ψ = *κh* but in the classical Greek alphabet all trace of these values has disappeared On the other hand, in Roman inscriptions of all periods we find XS for X[1], which looks as if the idea of X as = *ch* (χ) still influenced to some extent its written value Its place in the Roman alphabet was of course determined by that of Greek X (χ)

B *Roman Alphabet* The history of the Roman alphabet will be found fully treated in such books as Wordsworth's 'Fragments and Specimens of Early Latin' (Introd chap II), and Roby's Latin Grammar, and need only be briefly noticed here[2] It was derived from the Dorian alphabet of the Chalcidian colony of Cumae, as is shown by the form of *S* = ϟ, and the use of ϙ (Koppa), and in its oldest form seems to have consisted of twenty-one letters, viz *A*, *B*, *C*, *D*, *E*, *F*, *Z*, *H* *I*, *K*, *L*, *M*, *N*, *O*, *P*, *Q*, *R*, *S*, *T*, *V*, *X* The three aspirates *th*, *ph*, *ch* (in the Dorian character O, φ, ↓) were never used by the Romans, but the characters were retained as numeral signs ↓ (χ) was written ⊥, and abbreviated into L = 50, O, with its circle incomplete, became C = 100, and was then identified with the initial of *centum* and φ became CIↃ or ⅭⅠↃ, and finally M = 1000 D = 500 is the half of φ, X = 10 is perhaps from ⊗, an ancient form of *θ*, and V = 5 is the half of X

Z went out of use at a very early period, its occurrence in the 'Carmen Saliare,' and on a single coin, being in fact the only evidence for its having been used at all, but in the time of Cicero it was reintroduced for the transcription of Greek ζ

K went out of use, probably before the XII Tables, except in a few old abbreviations (Kal = Calendae, K = Kaeso, etc), and *C* was used to denote both the guttural *tenuis* and *media*, until a modified form, *G*, was taken to represent the *media* The earliest inscription upon which *G* is found is the epitaph of

---

[1] Mr Roby quotes as instances *exstrad* (S C de Bacch, see Appendix I), *taxsat*, *lexs*, *proxsumus* *exsiguo* *deixserit*

[2] The most complete account (from which the others referred to are mainly derived) is to be found in pp 1–29 of Corssen's 'Ueber Aussprache,' etc, vol 1 For illustrations and examples reference must be made to Corssen.

Scipio Barbatus, i e not later than 240 B C (Appendix I) The old *C* was retained in *C*, *CN*=Gaius, Gnaeus

In the time of Cicero, *Y* and *Z* were introduced for representing *υ* and *ζ* in Greek words and the combinations *th*, *ph*, *ch*, were written for the first time (see below, chap. IV)

The Emperor Claudius tried to introduce three new letters, viz an inverted digamma Ⅎ, for the consonantal sound of *v;* a reversed Greek sigma Ↄ, for *bs* or *ps*, and the sign of the Greek *spiritus asper* ⊢ (see above, p 43), for the middle sound between *i* and *u*, i e Greek *υ* The first and third of these letters are found on monuments of the period, but did not remain in use while for the 'anti-sigma,' as it was called, there is no evidence even of contemporary monuments

Double consonants[1] were not written till the time of Ennius, who is said to have introduced the practice in imitation of Greek The earliest instance upon inscriptions is about 186 B C (see Appendix I), from which time to that of the Gracchi (about 120 B C) usage fluctuates after 120 B C doubled consonants are general Another method of denoting stress upon a consonant was by the 'sicilicus' (so called from its shape, *sica*), e g *ser'a*, *as'eres*=*serra*, *asseres.*

The example of Greek *η* and *ω* led Roman *litterati* to try various methods for expressing long vowel sound

(*a*) Doubling the vowel, said to have been used by the poet Accius, and found on inscriptions of his time between 130 and 75 B C, always with the vowels *A*, *E*, *V* (VOOTUM is found on an earlier inscription) A double *I* was used after Cicero and Caesar to express the semivowel *j* (*Aiiax*, *Maiia*, etc)

(*b*) The length of *ī* was in earlier Latin expressed by writing it *ei*, but after Sulla's time by making the *i* taller than the other letters (VICUS, LIBERI, etc). This tall *i* was also used for the semivowel or *j* sound, especially at the beginning of words

---

[1] The date of the introduction of doubled consonants is of some importance for the scansion of Plautus Plautus died fifteen years before Ennius, and but few instances of double consonants in his plays can be really genuine *Supĕlectile*, *simĭlumae*, *satĕlites*, *sagĭta*, etc are generally correct, and *ille*, *esse* must often be scanned *ĭle*, *ĕse* See Wagner, Introduction to *Aulularia*, pp. xli–xliv.

(Ivs, Ivbeto, etc), and in later inscriptions it is used confusedly for both *ī* and *ĭ*.

(*c*) By an accent or 'apex' (′) from about 63 B C. onwards In Republican inscriptions this apex is found over *A*, *E*, *EI*, *O*, *V* (for examples, see Corssen, I. p 22), in the Augustan age it is almost universal

The Romans devised a simple nomenclature for the letters, which has superseded the Graeco-Phoenician names of the Greek alphabet The vowels were denoted by their own sound, the explosive (mute) consonants and *h* by a vowel after them, the fricative and nasal sounds by a vowel before them The vowel employed for this purpose was *e*, except that *k*, *h* were called *ka*, *ha*, *q* was called *qu*, and *x*, *ix*

CHAPTER IV.

CHANGES AND MODIFICATIONS OF SOUNDS[1]

THESE must be noticed here so far as they affect Latin and Greek, and further illustrations of their operation will appear hereafter in the explanation of inflections Sounds, we must remember, are interchanged and modified (*a*) between two or more languages [*δάκρυ*, *lacrima*, duo, *two*, *zwei*, *πέντε*, *quinque*], (*b*) in the same language [e g *tego*, *toga*, *τρέφω*, *θρέψω*]. These changes and modifications proceed according to definite rules, varying sometimes in different languages, and the correct investigation of these rules is the basis of all true etymology

Two general principles affect etymology —

Harder sounds not derived fro easier

(*a*) *Harder sounds are not derived from easier*, or words which have retained a stronger letter from those which exhibit a correspondingly weak one (In our Table of sounds Gutturals are stronger than Palatals, and so downwards, Tenues stronger than Mediae, Explosive stronger than Fricative) Thus *κοῖος* must be older than *ποῖος*, *equus* than *ἵππος* (*ἴκκος*, **açvas**), *sus* than *ὗς*.

Apparent exceptions are often examples of the general phonetic law that change arises from weakness of articulation, e. g. *frag-or*, *frac-tus*. It is easier to pronounce tenuis and enuis together, media and media, aspirate and aspirate: so in

---

[1] In this chapter I have gone over somewhat the same ground as that overed by Peile's 'Introduction to Greek and Latin Etymology,' adopting in the main his arrangement of the phenomena of phonetic change, with many of his illustrations.

Greek, *λεκτός* from *λέγω*, *τυφθείς* from *τύπ-τω*, *πλεχθείς* from *πλέκω*.

So *hiem-p-s* appears stronger than **hiem-s;* but *p* is merely phonetic, inserted because it is difficult to sound *s* after *m* Again, the reduplicated form *θίθημι* is changed by Greeks to *τίθημι*, which is easier to pronounce, though *τ* by itself is stronger than *θ*

(*b*) *Generally*, only letters pronounced at the same part of the mouth are etymologically interchangeable—dentals with dentals, labials with labials, etc [Gutturals, however, the strongest sounds of all, sometimes give way altogether to dentals or labials, and in Sanskrit, Greek, Latin, and Gothic, are found less frequently than these latter]

Apparent exceptions may often be explained by the existence of both sounds in the original form, e g *bis* and *δίς* cp Sanskrit **dvis** Here the Latin *b* is due to the *v* (*w*) sound In *ἵππος*, Lat. *equus*, Sanskrit **açvas**, *π* represents the *v* sound *σύν* and *cum* are the same word, but from *ξυν*=*κσυν* so *καπ-νός* and *vap-or* are reconciled by Lithuanian *kvap-as*

The latest and most comprehensive explanation of such changes, however, is that which refers them to the influence of *weak articulation* One or two examples of its effects are subjoined

1 *Labialism*, or change from *k* to *π*, *p*, is supposed by Curtius to be due to a parasitical *v* (*w*), unconsciously produced by lazy articulation of *k* ('labial after sound'). That *v* (*w*), following *k*, could change it to *p*, appears from Indo-European *akva*, Sanskrit **açva**, *equos*, *ἵππος* (which must=*ἰκϝος*) Here *kv* has become in Greek *ππ*.

That the *v* in these cases was merely phonetic, not a suffix, appears from instances where Latin has *kv* (*qu*), as well as *k* (*c*), e g *sequ-or*, *sec-undus*; *coqu-o*, *coc-us*. Greek *ἕπομαι*, *πέπων* show that *v* must be parasitic in Graeco-Italian time, and retained by Latin in some words while dropped by Greek (Peile, 286, 7[1]). So with the change from *g* to *β*, *b*, Latin *gu* gives the middle step In *urguere, urgere, tinguo, τέγγω, v* is parasitic; but it is less often so after *g* than after *k, g* being an easier sound.

---

[1] Corssen ('Ueber Aussprache,' etc i pp 71–75) shows that *qu* was a mode of denoting the labial 'after sound,' or modification of the guttural

2. *Dentalism* *k* changed to *t*, probably from influence of *y* sound (*i* or *j*), as in transition from *-cio* to *-tio*, where *i* is semivowel Here it is part of a suffix, but this proves the power of *y* sound to change a guttural to a dental, and hence philologists assume a parasitic *y* where they find the change without any apparent reason There are, however, few certain examples *τέ, que*, Sanskrit **ca**, Zend **ca**, Indo-Eur **katvar*, Sanskrit **catvāras**, *τέτταρες* (=*τέτϜαρες*), *quattuor*

These two instances of change from one class of sounds to another are given to show that some reason can generally be found for the apparent non-observance of our rule (*b*). We may now pass to the consideration of the two main heads under which all changes of sounds seem to fall, viz,

(*a*) *Dynamic change*, which is voluntary, and intended to express change of meaning, the *formative* principle in language.

(*b*) *Phonetic*[1] *change*, which is involuntary, and due mainly to lax articulation, the *destructive* principle in language.

We need only here enumerate, with a few examples under each head, the principal changes of sounds that affect Latin and Greek, referring the student for a fuller illustration to such books as Schleicher's 'Compendium,' and Peile's 'Introduction to Greek and Latin Etymology'

A *Dynamic change*

1 *Reduplication* This appears to be the earliest and most natural device of language to strengthen the expression of an idea, observed most frequently in the language of savages and

---

tenuis, and so a transition from guttural *k* to labial *p* In English, similar labial modification of the dentals is expressed in *between, dwarf*, and palatal modification is heard in the pronunciation of *nature, verdure* (*ty, dy*) The labial modification of *d* (*dw*) is expressed in Old Latin *duellum*, but passed into the simple labial in classical Latin, *bellum* Cp *bis* with Sanskrit **dvis**, quoted above, and *duonoro*(*m*)=*bonorum* on old inscriptions

[1] 'Phonetic' is sometimes applied in a wider sense to any change of sound, voluntary or involuntary I have restricted myself to its more limited application.

children, and commoner in the earlier than in the later stage of highly developed languages such as Greek and Latin. In these it is gradually superseded by more refined and subtle modes of expressing the required change of meaning, and traces of its application remain only in occasional and (for the most part) exceptional phenomena —

(*a*) In *imitative* words, e g *ululo*, ἀλαλάζω; or names of animals expressive of their sound, e g *cuculus*, *turtur*, ἔποψ, τέττιξ.

(*b*) In *Alliteration*[1], a favourite device of early Latin and Greek poetry (and also among other nations), to strengthen the expression of an idea by mere repetition of the sound of letters and syllables Ennius and Naevius exhibit constant examples of its use, as also does Plautus, with whom however it becomes more of a trick of composition. Lucretius also employs it with considerable effect (for examples, cp Munro's 'Introduction to Notes,' II pp 106, 107, 1st ed.), and Virgil does not disdain this among other poetical artifices, e g Aen vi. 834 —

> 'Neu patriae validas in viscera vertite vires'

Alliteration, of course, does not prove the use of reduplication as a *formative* principle in language, but it illustrates the natural tendency to intensify an idea by the repetition of sound

(*c*) As a formative principle, Reduplication is commonly employed in Indo-European languages to produce 'frequentative' and 'desiderative' verbs In Sanskrit such words are regularly formed from every root, by reduplicating the initial consonant and vowel of the root, and suffixing in one case **ya**, in the other **ish** or **sh** Thus from the root **budh** (='to know') are formed **bobudhye**[2] (frequentative or intensive), **bobudishámi** (desiderative), from *vid* (='to know,' Greek Ϝιδεῖν, Latin *vid-ere*), **vividye** (frequentative), **vividishāmi** (desiderative). Similar formations in Greek and Latin are μαρμαίρειν (root *mar*[3], originally = 'to grind down,' 'rub,' and so 'polish'), 'to flash,' *παμφαίνειν* (root *φαν*, as in *ἐ-φάν-ην*), *ποιπνύω*, *δειδίσσομαι*, *μερμηρίζειν*, cp Lat *me-mor-ia*, etc, or in nouns, *λαῖλαψ* (root *λαβ*, as in *ἔ-λαβ-ον*, (*δαιδάλεος*, *παιπαλόεις*, *ἀμαιμάκετος*. The same force appears in the reduplicated 2 aorist

---

[1] On the use and effects of alliteration in Latin poetry, see Munro's 'Lucretius,' Introduction to Notes, II (vol ii p 106, 1st ed)

[2] Greek μι-μέομαι = μι-μά yo-μαι is perhaps analogous to *bo bhud ya*

[3] The various ramifications of this root *mar* are exhaustively traced in Max Müller's 'Lectures,' II. vii.

(*d*) Reduplication is also employed in the formation of some 'present stems' (denoting, apparently, protracted as distinguished from momentary action), e g *δίδωμι*, *τίθημι*, *γίγνομαι*, *πίπτω* (root *πετ*, as in *ἔ-πεσ-ον*); Lat. *sisto*, *gigno*, *sero* (=*se-so*, root *sa*, as in *sa-tum*) More commonly still (in Greek almost universally), to form 'perfect stems,' e g *λέλοιπα* (root *λιπ*, as in *ἔ-λιπ-ον*), *pepuli* such forms, indeed, are too familiar to require illustration for the present.

2 *Vowel Modification* ('strengthening' or the reverse), e. g for the formation of Noun or Verb stems: *λιπ-*, *λείπ-ω*, *λοιπ-ός*, *fĭd-*, *fīd-o*, *foidus* (*foedus*) It appears that Indo-European speech expressed these and similar modifications of ideas by modifying the vocal sounds, so as to form a regularly ascending scale of each of the three primitive vowels, *a*, *i*, *u*

The vowel sounds thus gained were used by different Indo-European peoples, according to different phonetic laws, with more or less regularity Sanskrit exhibits them as follows[1]:—

a,	1st a or ā	2nd ā	(in many roots there is no distinction between the original *a* and its first raising)
i,	ē (for ai)	āi	
u,	ō (for au)	āu	
ṛi,	ar	ār	
ḷi,	al	āl	

---

[1] The two stages of vowel increase in Sanskrit are known by the names of Guna (गुण, 'quality') and Vṛiddhi (वृद्धि, 'increase') Thus from √vid, 'know,' is formed by Guna, **Veda**, by Vṛiddhi with addition of a suffix *-ika*) **Vaidika** = 'belonging to the Vedas' It is doubtful, however, whether anything strictly answering to Vṛiddhi is found in the cognate languages In conjugation, vowel intensification strengthens verbal bases in those persons whose terminations are called weak Thus from √ i, 'go,' is formed in sing **émi, éshi, éti**, in plur **i-más**, &c cp Gk *εἶμι*, *εἶς* or *εἶ*, *εἶσι*, *ἴμεν*

The questions whether the larger (or 'raised') forms of roots are derived from the shorter (*λειπ-* from *λιπ-*), or *vice versa*, and whether the change from *ε* to *ο* represents an original lengthening or not, need not be discussed in an elementary work.

These scales are employed in the formation from *roots* of noun and verb stems. Indications of a similar employment of vowel scales are exhibited by Gothic and Lithuanian (Peile, pp 191–2), and by Greek and Latin; by Greek most fully, its vowel system being stronger and less liable to corruption than that of Latin

The scales in Greek are —

A scale	*α, ε, ο,* raised 1st to *ᾱ* or *η*		2nd to *ω*	
e g	*λακ,*	*λέλᾱκα* } perfect stems	*ῥήγνυμι,*	*ἔρρωγα,*
	ἀγ,	*ἔᾱγα,*	*πτήσσω,*	*πτώξ*
I scale	*ι* raised 1st to *ει* (*αι*),		2nd to *οι*	
e g	*λιπ,*	*λείπω,*		*λέλοιπα,*
	πιθ,	*πείθω,*	*πείθω,*	*πέποιθα,*
	ἰδ,	*εἴδω,*	*εἴδω,*	*οἶδα*
U scale	*ῠ* raised 1st to *ευ* (*αυ*)		2nd to *ου* (*ᾱυ*)	
e g	*ελευθ,*	(*ἤλῠθ-ον*),		*ειλήλουθα,*
	πνυ,	*πνεῦμα,*	*σεύω,*	*σοῦμαι,*
	χυ,	*χεύω,*	*σπεύδω,*	*σπουδή*
N scale	*ν* or *ᾰ*, raised 1st to *εν*		2nd to *ον*	
e g	*γᾰ* (*γέ-γα-μεν*),	*γέν-ος,*	*γέγονα,*	*γόνος,*
	τᾰ (*τα τός*),	*ἀ-τεν-ής,*	*τόνος,*	
	πᾰθ,	*πένθ ος,*	*πέπονθα,*	
	μν (*μί μν ω*),	*μένω,*	*μόνος*	
(Sometimes *ᾰν*, as)				
	ἔ-κτᾰν ον,	(*κτεν*),	*ἔκτονα*	
R scale	*ρ* or *ᾰρ* (*ρᾰ*), raised 1st to *ερ* (*ρε*)		2nd to *ορ* (*ρο*)	
e g	*μᾰρ,*	*μέρ-ος,*	*ἔμμορα,*	*μόρος,*
	πρᾰθ,	*πέρθ-ω,*	*πέπορθα,*	
	τρᾰπ,	*τρέπ-ω,*	*τροπος,*	
	δρᾰκ,	*δέρκ ομαι,*	*δέδορκα*	
L scale	*λ* or *ᾰλ* raised 1st to *ελ.*		2nd to *ολ*	
e g	*πλ* (*ἔ-πλ-ετο*),	*πέλ ω,*	*πόλος,*	
	βᾰλ	*βέλ-ος,*	*βολή,*	
	τᾰλ (*ἐ-τέ-ταλ-το*),	*τέλ-ος,*	*ἐν τολή*	

Scale consisting of short vowels, with loss of *ε if possible* in the short orm of the root, and 2nd raising by change to *ο*

e. g	*σχ* (*ἔ-σχ-ον*),	*ἔχ-ω* (*σεχ*),	*ὄχος,*	
	σπ (*ἕ-σπ-ετο*),	*ἕπ-ομαι,*	*ὅπ-λον,*	
	πτ (*πί-πτ-ω*),	*πετ,*	*ποτ-μός,*	
	τεκ (*ἔ-τεκ-ον*),	*τέκ-ος,*	*τέτοκα,*	*τόκος,*
	(*λγ*)	*λέγ-ω,*	*λόγος*	

Traces of vowel scales in Latin —

A scale	e, a, raised 1st to ē, ā		2nd to ō
e g	lĕgo,	lēgem,	sonus, persōna,
	placere,	plācare	vox (vŏco), vōcem
I scale	i raised to [ei], ī, ē [ai], oe		2nd to [oi], oe, ū.
e g I	dĭc,	dīco,	moenera, moinera, munera,
	fid-es,	fīdo,	foidus, foedus
U scale	u raised 1st to [eu], au, ō		2nd to [ou], ū.
	duc,	dūcere,	douco (inscr)
N scale	en (ĭn)		2nd raising on
	mens (Sanskr ma-tis),		moneo
R scale	r (ŏr, ŭr) raised 1st to er		2nd to or
	fors,	fero,	
	posco (porc-sco),	prec-ari,	proc us
Scale with short vowels			
		nec-s,	noceo,
		sequi,	socius,
		tego,	toga

3. *Nasalisation* may possibly also be reckoned as a process of 'Dynamic Change,' as being an extension of consonantal sound parallel to that of vowel sound just described, e g in *tundo* (root *tud*), where *tund tud* πειθ- πιθ In its origin the nasal is a variety of another sound (see above, p 33), and the guttural nasal is found (except in Sanskrit) only in combination with the guttural which produced it (*ἀγχόνη, angustus*) Nasalisation occurs chiefly in the formation of a certain class of present stems in Greek and Latin, and in the verbs so formed it is (like vowel-intensification for the same purpose) confined to the present stem This formation will be found discussed in chap. viii, and if the view there adopted, that the nasal is dynamic, and not merely part of a grammatical suffix, be correct, we possibly may reckon Nasalisation with Reduplication and Vowel Intensification as a means of 'Dynamic change[1].'

---

[1] Consult especially Curtius, 'Tempora und Modi,' pp 53-66; 'Das Verbum,' i pp 240 sqq , also Peile, ch. vi. pp. 215-220 (3rd ed.).

B. Phonetic Change.—

The difficulty of tracing vowel-intensification in Latin points to the opposite process of weakening or decay, which in vowels is particularly characteristic of that language This brings us to the second head of change, viz. that which is involuntary, or 'phonetic' strictly so called, the principle of 'Phonetic Decay,' which plays so large a part in the history of language. As has already been pointed out (chap iii) the cause of such change is the conscious or unconscious effort after ease of articulation

Its effects may be traced (i) in the substitution of a weaker for a stronger sound, (ii) in the loss of letters representing certain sounds, (iii) in 'assimilation' to a neighbouring sound, where the concurrence of two *dissimilar* sounds causes difficulty of pronunciation, (iv) in 'dissimilation,' where the concurrence of two *similar* sounds causes a like difficulty We may look at these effects I in vowels, II in consonants

I. Vowels (i) *Substitution of weaker for stronger sound* The Latin language, we saw, retained fewer traces than Greek of the system of Vowel Intensification On the contrary, it is especially distinguished by weakness and decay of vowel sounds. Thus of six diphthongs (*ai, ei, oi, au, eu, ou*), once in use as Latin sounds, and traceable on inscriptions, five had dwindled down to simple sounds by the time of Plautus, *au* being the only one generally preserved (with the exception of *eu* in a few words, *neu, ceu, neuter, heus,* etc), while here we have a weakening to *o*, and forms with this weaker sound side by side with those retaining *au*, e g *lautus, lotus, Claudius, Clodius, plaudo, explodo* The other diphthongal sounds were entirely superseded by the weaker forms, e.g *quaistor* by *quaestor, coirare* by *coerare,* then *curare* (cp *foidus, foedus*), *deivus* by *dīvus, omneis* by *omnēs ; joudex* by *judex.* In vowel sounds again, Latin shows a constantly progressive degradation of sounds from stronger to weaker, as represented in the following scale·—

A to O . U . . E . I
O to U E . I
U . E I
E to I, U
I to E

A comparison of Greek and Latin with Sanskrit shows that the original vowel *a* (largely predominant in Sanskrit) has been changed first by breaking up into the three sounds of *a*, *e*, *o* (e g *ποδός*, *πόδες*, *πόδας*, Sanskrit **padás**, **pádas**, **pádas**), and then by further weakening of each of these three sounds While, however, in Greek the process of vowel change was (speaking generally) confined to the breaking up of original *a* into *α*, *ε*, *ο*, (*ι* remaining unaltered,) and a vowel of one scale but seldom passing into another (*α* to *ι* or *υ*[1]) in Latin such further changes are so frequent as to assume the character of special phonetic laws of the Latin language A few examples under the heads of formative elements, composition, and reduplication, will make this clear

(*a*) *Formative elements* I Verbs Sanskrit **bharâ-mas** becomes Greek *φέρο-μες* (Doric), the thematic[2] *a* passing to the *o* sound and there remaining. Latin weakens *o* to *u* in *vol-u-mus*, and generally weakens it still further to *i*, e g *fer-i-mus* The apparently unsubstantial character of the second *a* in **bharâ-mas**, as a mere link between stem and termination, has perhaps helped its decline and we see that in the termination *-mus* it has not sunk so far In the termination again of 3rd pers plur (Sanskrit **anti**, Greek *-οντι* (Doric), Latin *-unt*), the weakening of *a* in Latin, though it goes one step further than Greek, stops at *u*, while such forms as *dederont*, found on inscriptions, and the retention of *o* after *u* in *quom*, *loquontur*, etc, show that the *o* sound was not entirely superseded In *ferentem* and *ferendum*, however, the *a* before *nt* sinks down to *e*; old legal forms like *jure dicundo*, *res repetundae*, also *moribundus*, *oriundus*, *secundus*

---

[1] Schleicher (comp § 32) gives a few examples of *a* of primitive Indo-European roots weakened to *ι* or *υ* in Greek, e g **dadāmi**, *δίδωμι*, *μύλος*, from root *mal* (*mar*), *νυκτ-*, Lat *noct-*, Skt. **nakta**. See also Peile, ch vii. (p 275, 3rd ed)

[2] **The 'thematic' or, as it used to be called, 'connecting vowel' is explained in ch. viii.**

(=*sequendus*), etc, remaining as evidence of an earlier stage in the process of decline The Greek participle stops short at *o*, in *φέροντος*

In final syllables the vowel usually sinks to *e*, e g *monueront*, *-unt;* then (*nt* being lost by the lax pronunciation of the final syllable, which was characteristic of Latin) *monuere, uteris, utere, ipsus, ipse,* cp. ablative in *ĕ* of 3rd declension, originally *ī* The reason for *i*, the weakest of the vowel sounds, thus passing to *e* in termination, is suggested by Corssen to be, that in pronouncing *e* the organs of speech vary least from their position when at rest.

2 Nouns The masculine terminations *-os* and *-us* (in early Latin *-os*) represent Sanskrit **-as**, the *a* sinking in Greek to *o*, in Latin a step further to *u*. So neuter terminations, Sanskrit **janas**, Greek *γένος*, Latin *genus*, in oblique cases sinking to *-ες*, *γένε(σ)ος*, *gener-is*, but in some words retaining the stronger sound, e g. *corpor-is* = *corpos-is*, from *corpus* In gen plur *duonoro(m)*=*bonorum*, shows that *-um* is a weakening of *-om* (cp Greek *-ων*), representing an original *-ām*, the older vowel sound being apparently retained in provincial Latin, and transmitted to modern Italian—e g *loro*=*illorum*

(*b*) *Composition* *a*, *o*, *u*, in Latin frequently weakened to *i*, the lightest vowel, from effort after lightness of sound, e g *causidicus* (*causa*), *armiger* (*armo-*), *corniger* (*cornu*) Especially is this the case in composition with prepositions, where such weakening is the rule with but few exceptions, cp e g *capio* with its compounds, and with *auceps*, *castus* with *incestus*, etc In Greek compound verbs, on the contrary, the original form remained generally intact—cp. *ἄγω*, *συνάγω*, *πυράγω*, *κατάγω*, with *ago*, *redigo*, *subigo*, etc Where this prevailing tendency did not obtain in Latin words, the exception may sometimes be accounted for by the particular meaning, e g in *tepefacere*, *calefacere*, etc The idea of causation, obviously represented by *facere*, may have prevented the sinking of the vowel which takes place in *conficere*, *perficere*, etc. Other exceptions, for which it is not easy to see a reason, are *posthabere*, cp. with *prohibere*, *perfaciles* with *difficiles*, *expando* (perhaps to distinguish it from compounds of *pendo*, e. g. *expendo*), etc.

(c) *Reduplication* Here Greek and Latin both weaken the vowel in the reduplicated syllable in most cases to *e*, as in *τέτυφα* (root *τυπ*), *tetuli*. Latin in some words retains a stronger vowel, e g *poposci*, *cucurri*, but side by side with these are found such forms as *peposci*, showing the tendency to uniformity, regarding these syllables as mere grammatical forms. And Latin goes further than Greek in weakening the vowel of the radical syllable also, e g *pepigi* (root *pag*, seen in *pac-tum*), *cecidi* (root *cad*).

(ii) *Loss of Vowel Sounds* Uncommon in Greek, except in a few verbs which form a present stem by reduplication, and drop the root vowel, *πι-π(έ)τ-ω*), *γι-γ(έ)ν-ομαι*, *μι-μ(έ)ν-ω*, etc., and sometimes in formative suffixes before an inflection, e g *πα-τ(ε)ρός*, *μητ(ε)ρός*.

In Latin *a* drops in *clarus* and *clamor* (root *cal*), *palma* (Greek *παλάμη*), *cupressos* (*κυπάρισσος*), *o* in *vict(o)rix*, *nep(o)tis*, *doct(o)rina*, etc , *u* before *l* (this consonant and vowel having an affinity for each other, as being produced near each other in the mouth), in *vinc(u)lum*, *peric(u)lum*, *saec(u)lum*, etc , and in words formed with the suffix *-ulo-*, the preceding consonant (especially *n* or *r*) then assimilating itself to *l* and producing the terminations *-ello*, *-ollo*, *-illo*, *-ullo*, e g *ocellus* (=*ocululus*), *libellus* (=*liberulus*), *asellus* (*asinulus*), *homullus* (*homonulus*), *corolla* (*coronula*), *bacillus* (*bacululus*), *pupillus* (*pupilulus*), *stella* (*ster-ula*) *e* before *r* (its most cognate consonant), especially in the suffixes *-ero*, *-bero*, *-tero*, etc., *lib(e)ri*, *inf(e)ra*, *ag(e)ri*, *lateb(e)ra*, *sac(e)ro*, *soc(e)rus*, etc Far more frequent is the loss of *i*, the thinnest of the vowel sounds, and the most frequent substitute for the stronger vowels. It seems capable of dropping out from almost any position, as e g in such familiar words as *quaes(i)tor*, *audac(i)ter*, *val(i)de*, *gaudeo* (cp *gavisus*), *fer(i)t*, *dixti* (*dic-si-sti*), and similar contractions, *teg(i)men*, *repos(i)tus*, *co(i)go*, *sur(i)go*, *porgo* (beside the longer form *porrigo*), etc.

That this decay of vowel sounds was caused by the vowel gradually dying out of *unaccented* syllables, is the most recent and most probable explanation. This is not the place for a

discussion upon the Latin accent, such as may be found at length in Corssen's great work, 'Ueber Aussprache,' etc., and briefly summarised in Peile's 'Introduction.' We need only notice (1) that the decay first in quantity[1], and then in form of *final* syllables, which marks the history of Latin speech, seems most fully connected with the known law of Latin accentuation[2], never to accent the final syllable (2) that many of the apparent metrical irregularities in the lines of Plautus and Terence (lines which, as intended to be spoken, are naturally subject to the practice of ordinary pronunciation), are best explained by the neglect in rapid pronunciation of sounds in syllables upon which no stress was laid[3] We have only to pronounce the words ourselves to understand the Plautine prosody of *volŭptátem*, *ferĕntárius*, *senĕctúti*, and in these and numberless other cases of comic prosody, the vowel sound is in a kind of intermediate stage between full pronunciation and total extinction—written, but scarcely heard, and liable to be pronounced more or less distinctly according to chance

N.B The change of quantity from long to short in final syllables is a loss or weakening of vowel sound, just as raising or lengthening a short vowel is a gain or 'intensification of sound' Loss of quantity is an intermediate step to extinction of a final sound, and the gradual decay of sounds can often be historically traced through distinct stages of decline—a syllable with a vowel naturally long becoming short in ordinary usages (as *amăt*, *monĕt*, cp *amāre*, *monēre*; *honŏr*, cp *honōris*), then losing its final consonant, and finally, perhaps, disappearing altogether

---

[1] As the lengthening a short vowel is a process of raising or increasing (or 'intensifying,' see p 53) the vowel sound, so the shortening a long vowel is a decreasing or diminishing, and the result a *decay* in quantity

[2] The rules of Latin accentuation (little familiar to us as *rules* from the fact that they coincide so nearly with our English accentuation of Latin words) are given by Quintilian, I O 1 5 22-31 See Roby's 'Latin Grammar,' vol 1 § 296 sqq , and Wordsworth, 'Fragments and Specimens,' Introd ch iv

[3] On this question of Plautine and Terentian prosody I may be permitted to refer to Introd, Part IV of my edition of Terence, *Andria* (Rivingtons, 1875) Reference is there made to other and fuller sources of information.

(iii) *Assimilation of Vowels* (1) *by Consonants*, through their phonetic relationship to particular vowels (see above)

a, the fullest and most independent vowel sound, is subject to no such influence. It passes into *o* by weakening of articulation, and so down the scale of descent to *u*, *e*, *i* None of these however rise to *a*, nor do *u*, *e*, *i* rise to *o* The difference in strength between *a* and *o* was clearly felt, as also between *o* and *u*, but between *u*, *e*, *i* there was no such strongly marked difference, and in their case the order of descent is sometimes stopped or varied by the influence of neighbouring sounds Thus *u*, by its affinity to the labial nasal *m*, was retained at an early stage of the language in *sumus*, *volumus*, the vowel which in Sanskrit is **a** (**bharāmas**), and in Greek *ο* (*φέρομεν*), sinking generally in Latin to *i* (*ferimus*) To the same influence (of labial *b*) perhaps are due the forms *Hecuba* (older *Hecoba*, Greek Ἑκάβη, and *triumpus* (Greek *θρίαμβος*) *l* however is the sound which, especially when followed by another consonant, had the greatest tendency to produce *u* Thus *e* rises to *u* in *pulsus* from *pello*, *sepultus* from *sepelio*, cp *mulgeo*, *ἀμέλγω*, *stultus*, *stolidus*, *sulcus*, *ὁλκός*, *scopulus*, *σκόπελος*, *pessulus* *πάσσαλος*, *crapula*, *κραιπάλη* *e* had an especial affinity to *r*[1] so in oblique cases of neuters in *-us* (=Greek *-ος*, Sanskrit **-as**), where the *s* becomes *r*, the *u* sinks to *e*, e g *funus*, *funeris* (cp *funes-tus*), *genus*, *generis* (cp *γένεσ-ος*, *γένεος*) Sometimes *i* rises to *e*, from influence of *r*, e g *pulvis*, *pulveris*, and *e* is the commonest vowel in Latin before two consonants or a double consonant (*x*), e g *judex*, but *judicis* *auceps*, but *aucupis*—remaining sometimes where one of the two has been dropped, e g *mile(t)s*, *milit-is*, *dive(t)s*, *divitis* Cp also the participial forms, *-en(t)s* and *-endus*, the *u* surviving in *euntis*, etc, and in old legal forms, e g *jure dicundo*

i, as the thinnest of vowel sounds, and the point to which all vowel sounds naturally tended to sink, can hardly be said to be the result of assimilation, so much as of the absence of any assimilating tendency which would retain the vowel at an earlier stage of decline. It seems however to have a certain affinity for *dental* sounds, e g before *n* in *machina*, *bal(i)nea*, *trutina* (cp *μηχανή*, *βαλανεῖον*, *τρυτάνη*), and before the suffix *-no* in *dominus*, etc (cp. with Greek *πιθανός*, *ἱκανός*, etc), in a large class of genitives in *-inis*, from stems originally in *-on*, e g. *turbinis*, *imaginis*, *hominis* (old form *hemones*), *Apollinis* (old form *Apolones*), before *t*, *d*, in verbal conjugation, *agite*, *agito* (*ἄγετε*, *ἀγέτω*) *gemitus* (*gemĕre*), *domitus* (*domā-re*), *debitus* (*debēre*), or in formations like *candidus*, *frigidus* (*frigē-re*), *morbidus* (*morbo-*)

---

[1] Roby, 'Latin Grammar,' vol 1 § 39

(2) Assimilation of vowels by other vowels is seen in the tendency of two vowels coming into contact to approach each other Thus a root vowel *i*, in contact with *a*, *o*, and *u*, becomes *e* in *queam*, *queunt*, *eo*, *eam*, *eundi*, etc, but remains unmodified in forms where there is no such contact, *nequit*, *nequibat*, *imus*, *ibo* The oblique cases of *is* show the same change Again, where two vowels are separated by a consonant, the latter (especially *i*) tends to assimilate the former[1] This is seen in many proper names, *Duilius* for *Duellius*, *Lucilius* (*Lucullus*), *Popilius* (*populus*), in derivatives, such as *consilium* (*consul*), *facilis* (*facultas*), *inquilinus* (*incola*) *e* assimilates *o* in *bene* (originally *bono*, then *bone*), *i* in *illecebrae* (root *lic*, of *allicio*), *u* is assimilated by *o* in *soboles* (*suboles*), *e* by *u* in *tugurium* (*teg*)

(3) *Dissimilation* is of less frequent operation, occurring only in some cases where, from whatever cause, the same vowel sound occurred twice, and acting then as a bar to further change Sometimes the two vowel sounds coalesced into one. thus, when *quom* tended to become *quum*, by substitution of *u* for *o*, the two vowels often coalesced, with the result *cum* (*q* not being written without *u*), but the principle of dissimilation retained the old spelling even in the Augustan age, and we have *quom* or *cum*, *equos* or *ecus*, *linquont* and *lincunt*, etc, indifferently[2] The same principle operated in retaining the older forms *euntis* rather than *eentis*, *ipsius*, *illius* rather than *ipsiis*, *illiis* (the genitive ending *-us*, Greek *-os*, regularly sinking to

---

[1] Roby, 'Latin Grammar,' vol i § 41

[2] See Munro's 'Lucretius,' Introd. to Notes, I. vol ii. p. 27, 1st ed.)

-is), and in avoiding *eeis* (dat plur. of *is*), by the form *eis* or *ieis*

II. *Changes of Consonants*. The respective characteristics of Latin and Greek are here reversed We have seen that the Latin vowel-system is weaker and has been subject to greater degeneration by phonetic change than the Greek but the Latin consonants are stronger, and (as will be seen) are comparatively free from assimilation, which obscures the radical form of many Greek words[1] Bearing in mind what has been already said of the relative strength of sounds, and of the general principle which governs all phonetic change—the desire to secure ease of articulation, the following general rules of consonantal change will be intelligible —

1 'Explosive' (or 'Momentary') sounds change to 'Protracted' or 'Fricative') sounds, not *vice versa* e g *c* (*k*) to *c* (*s*), *centum* to French *cent*, *t* to *s*, *tu*, *τυ*, *συ*, *d* to *l*, *δάκρυ*, *lacruma*, 'Οδυσσεύς, *Ulysses*, *b* to *v*, *habere*, Italian *avere*, French *avoir*, *p* to *v*, *sapere*, *savoir* *ph*, *ch*, *th*, to *f*[2], *φέρω*, *fero*, *χολή*, *fel*, *θήρ* (Aeol *φήρ*), *fera*, *ch* to *h*, *χαμαί*, *humi*, *χανδάνω*, *pre-hendo*

2 Gutturals change to dentals and labials, not *vice versa*

3 *Tenues* change to mediae in their respective classes, not *vice versa* (except where influenced by other sounds), e g *frag-*, *frac-tus* (see above, p. 49)

4 Rules (2) and (3) apply most obviously and uniformly to Explosive sounds or Consonants proper Among 'protracted' or momentary sounds it is not so easy to trace definite rules of change The contact of the vocal organs being less complete, in fact, an approximation only, the sounds are much less definite, and their strength depends more or less upon the length of time during which they are sounded The spirants *y*, *s*, *v* do not seem to interchange much, but neither *s* nor *v* passes into *y*, which, according to order of pronunciation, would naturally be the strongest sound. Of the liquids, *r* seems to be older than *l*, Greek and Latin often giving *l* where Sanskrit has *r*; and

---

[1] E g in *φράσσω*, as compared with Lat *farc-io*, see below, p 75

[2] For other examples see Roby, 'Latin Grammar,' i. § 99, and Corssen.

hence some philologists consider that *l* arises always from a weakening of original *r*, pointing in illustration to the fact that many children are unable to sound *r*, and substitute the easier *l* for it. Schleicher, e.g. ('Compendium,' § 147, 156), refers to λευκός, *luc-eo*, from root *ruk* (appearing in Sanskrit as **ruj**). *loc-utus*, λακ-εῖν, cp. with Sclavonic *rek-a*, 'I speak,' *re-lic-tus*, λιπ-εῖν, with Sanskrit **ric**, etc. but there seem to be other roots in which *l* is invariably found (see Peile, p. 85). And in the Romance languages *l* and *r* interchange both ways, e.g. *peregrinus* becomes *pellegrino*, and *Tibur*, *Tivoli*, but *lusciniolus* becomes *rossignuolo*, and *apostolus*, *apôtre*. *s* in Latin always passes to *r* between vowels, except in some cases[1], where *s* is not original but a substitution (e.g. for *ss* in *causa*, for *d* in *esuries*, etc.), or in compounds of words with initial *s* (*desilio*), and in Greek it frequently passes into the *spiritus asper* ' (ἅλς, *sal*, ἕδος, *sedes*, ὕλη, *silva*, etc.). This *h* sound in Greek is usually a remnant of one of the spirants, and weaker than any of them; in Latin it represents an original *gh*, and seems to have been more strongly sounded.

We may instance the effects of phonetic change upon consonants, under the same heads as those of vowel-change:—

(1) *Substitution of weaker for stronger sound.* (*a*) *media* for *tenuis*, *g* for *k*, *pac-iscor*, πήγ-νυμι, *pag-us*, *pango*, κυβερνάω, *guberno*, *curculio* (Plautus), *gurgulio*, *negotium nec-*). *t* seldom passes into *d*. In Greek δάπις (Aristoph. *Vespae* 676) perhaps = τάπης, νέποδες (Hom. Od. iv. 404), perhaps = *nepotes*. In Latin the confusion between *t* and *d* in the MS. spelling of words like *haud*, *apud*, *sed*, is to be referred to the general weakness and uncertainty of Latin final sounds. *p* passes to *b* in a few Greek words (e.g. ὕβρις from ὑπέρ), and in rather more Latin (e.g. *carbasus*, κάρπασος, *lambo*, *lab-ium*, λάπτειν, λαφύσσω); and *b* in Latin frequently represents Greek φ, *nebula*, νέφος, *orbus*, ὀρφανός, and the suffix *-ber* = -φορος (φέρω), *saluber*, *candela-brum*.

(*b*) Any further substitution of the mute or explosive sounds, e.g. *t*, *d*, *p*, *b*, belongs rather to the head of Assimilation

---

[1] Roby, 'Latin Grammar,' i. § 193.

There are, however, in Latin a few instances of *d* passing into *l* and *r* (probably due to some peculiarity in the Latin pronunciation of *d*, bringing it very near the point at which *l* and *r* were sounded), e g *olere* from root *od*, cp *odor*, ὄδωδα; *lacrima* =δάκρυ (cp Gothic *tagr*, our 'tear'), *lēvir* (see Forcellini),= δαϝήρ, cp Sanskrit **dēvar.** Similarly *lingua* must have been *dingua*, cp Gothic *tuggô*, German *zunge*, English *tongue*; and Festus states that Livius Andronicus actually wrote *dacrima*[1]. The change of *d* to *r* is chiefly found in the preposition *ad*, in composition before *v*, *f*, *arvocatos*, *arfuerunt*, *arvorsum*, *arvena*, *arfines*, etc; cp also *arbiter* (*ad-beto*), *arcesso* (*ad-cesso*). This change is sometimes reckoned as an effect of assimilation; but more probably arose from a weak pronunciation of *d*, near the point at which *r* is produced. And the appearance of these words with the *d* in classical Latin seems to show that this carelessness of pronunciation had only just begun to produce an effect upon orthography, when it was checked by the literary epoch of the language, and the inference is, that it was an accidental and isolated phenomenon in the Latin pronunciation of that particular sound

(*c*) Changes of *Spirants* (*y*, *s*, *v*). These have especially affected Greek, and in a great measure produced the distinctive feature of accumulation of vowels without a consonant, e g δηίοιο [once δασ-*y*ό-σ*yo*]

Y. There was no symbol for this spirant in the Greek alphabet, no doubt because the sound which we denote by it had disappeared or become changed It appears in Greek (1) as ι, especially in the suffix *yo*(ιο), thus ἀνδρέ-ιο-ς, εὐσέβεια (=εὐσέβεσ-*ya*), γενέτειρα (=γενέτερ-*ya*, τετυφυῖα (=τετύφυσ-*ya*), δήμοιο (Homeric genitive =δήμο-σ*yo*), (2) as ε, in κενεός [Epic form of κεν-*yo*, 'empty'], and in the contracted future forms, φευξοῦμαι=φευγ-σέο-μαι=φεύγ-σ*yo*, the ι remaining in the Doric form πραξίομες=πραγ-σίο-μες; (3) as the 'spiritus asper,' ἧπαρ, *jecur*, ἅγιος, Indo-Eur. *yagyas*;

---

[1] Bergk suggests that in Ennius' well known lines (Epigr i. 4)—

'Nemo me lacrumis decoret neque funera fletu
Faxit Cur? volito vivos per ora virum'—

the poet may have written *dacrumis*, which would obviously increase the force of the alliteration.

ὑσμίνη, from root *yudh* (*ὑθ* becoming *ὑσ* before *μ*) Or (4) it is altogether lost, as e g in Attic genitive *ἵππου*=*ἵπποο*, cp with Epic *ἵπποιο*; *πλέον*=*πλεῖον*, *φύω*=an older *φυίω* (Sanskrit **bhu-ya-**), and *χάλκεος* (Doric)=*χάλκειος*, *ἀλάθεα*=*ἀλάθεια*

S in Greek usually passes into the *spiritus asper* at the beginning of a word, as we see from many familiar examples where the analogy of other languages shows that the word once began with *σ*. (*ἕδος*, *ἑπτά*, *ἕπομαι*=*sequor*, *ὅς*=*σϝός*=*suus*) Sometimes a *spiritus asper* is due to a lost *σ*, which was not initial, e. g *εἱστήκειν*=*ε-ἑστήκειν*=*ἐ-σεστήκειν* (the root *sta* being reduplicated to *sa-sta*, *σε-στα*), *ἡμεῖς*=*ἀσμεῖς*, cp the form *ἄμμες*=*ἄσμες* At the end of roots and words an original *s* generally retained its place in Greek, and so in formative and case suffixes, being, in fact, one of the few final sounds which Greek euphony tolerated. at the beginning of words also it is sometimes found, e g *σιγάω*, *σελήνη*, but only regularly when a hard consonant follows, and protects it from the usual change to ʽ, as in *στορέννυμι*, *στοά*, *σχίζω*, etc.

In Latin *s* between two vowels is almost always changed to *r*, e g. *lares*=*lases* (Carmen Arvale), *feriae*=*fesiae* (cp *festus*), *heri*, *hesternus*, *χθές*, *eram*, *ero*, from stem *es* of *esum*, *gero*, *ges-tum*, *oneris*, *generis*=*ones-is*, *genes-is*, from stem *onus*, *genus*, gen plur suffix *-rum*=an original *sam*, and *r* of passive voice=*se* The only exceptions to this general law of change are (*a*) where *s* is not original, but a substitution for other sounds, e g for *ss* in *causa*, for *d* in *esuries* (*ed-o*), *ausim* (for *aud-sim*), (*b*) in compounds of words where *s* was initial, *de-silio*, *po-situra*, *prae-sentia*, *bi-sextus*, etc , (*c*) in certain other words, viz *asinus*, *basium*, *caesaries*, *casa*, *caseus*, *cisium*, *fusus*, *laser*, *miser*, *nasus*, *pusillus*, *quasillum*, *quaeso* (also *quaero*), *rosa*, *vasa*, and in some proper names, *Caesar*, *Kaeso*, *Lausus*, *Pisa*, *Sisenna*, *Sosia*[1]

In Greek, on the other hand, *σ* between two vowels drops out, e. g *γένεσ-ος*, *γένεος*, *γένους*, *τύπτη-σαι*, *τύπτεαι*, *τύπτῃ*, and this is almost universal, except in cases where the loss of *σ* would have created confusion, and an artificial effort was therefore made to retain it, or where, as in *τά-σις*, *ἵστη-σι*, the *σ* represents an original *τ* (*τα-τις*, *ἱστη-τι*) In some inflections also like *ἵστασαι*, the tendency to drop *σ* was resisted, the intellectual or instinctive desire of retaining the part of a word, which was characteristic of its meaning, in these cases triumphing over the physical tendency to reduce the effort of articulation. Similarly in Latin, the tendency to drop final *-s* seen in the constant change of forms like *amabaris*, *amaberis*, to *amabare*, *amabere*, is to a great extent resisted in the form *amaris*, because *amare* would lead to confusion with the pres. infin active, and *ab* is much seldomer changed in composition than *sub*, because of the danger of confusion with *ad*.

---

[1] These examples are chiefly from Roby's 'Latin Grammar,' vol. i. § 193.

In Latin final *-s* (like final *-m*) seems to have been faintly sounded in pronunciation[1], and thus was often omitted in writing also In the scansion of early Latin poetry it was ignored before an initial consonant (a fact noticed by Cicero, Orat 48 161), e g *tum lateralis dolor certissimus nuntius mortis*, Ennius 601 (Vahlen), and so often in Lucretius (e. g. i. 159, 186) and once in Catullus (116. 8, Ellis) From Terence Wagner instances in the Hecyra *auctus sit* 334, *defessus sum* 443, *incertus sum* 450, *expertus sum* 489, *nullus sum* 653, *usus sit* 878—all endings of iambic lines Virgil (Aen xii. 115) in imitating Ennius's *funduntque elatis naribus lucem*, transposes thus (to suit a stricter pronunciation of final *s*) *lucemque elatis naribus efflant*. The tendency recurred in the fourth century A D, and remains in Italian, Spanish, etc It is also, of course, illustrated by such forms as *nauta* (cp *ναύτης*), *ille*, *ipse* (for *illus*, *ipsus*), *puer*, *famul* (*puerus*, *famulus*), *pote*, *mage* (*potis*, *magis*), *amabare* (*amabaris*).

Ϝ=*Ϝ*. This spirant (pronounced[2] something like English *w*) was known to the Greeks at an early period by a distinct symbol, the Digamma (*Ϝ*), found chiefly upon old Doric and Aeolic inscriptions[3], and traceable in its effect upon the scansion of Homer; but evidently passing out of use at the earliest period to which such inscriptions carry us back The Digamma occasionally appears in ordinary classical Greek as *υ*, e. g. *δύο* (Sanskrit **dvau**, Gothic *tvai*, German *zwei*), and the Aeolic forms *χεύω*, *πνεύω*=*χέFω*, *πνέFω* In these latter Attic Greek has lost it, as also at the beginning of many words, in which, from the analogy of kindred forms in other languages, it must once have existed (*οἶνος*, *vinum*, *οἶδα*, *ἰδεῖν*, *vid-eo*, *ἔργον*, German *Werk*, English *work*). It also appears as *spiritus asper* (on the evidence, again, of comparison with other languages), e. g *ἕσπερος*, *vesper*, *ἕννυμι*=*ἕσ-νυμι*, *ves-tis*, *ἵσ-τωρ*=*ἰδ-τορ-*, from *Fιδ-* (the verb forms having lost it altogether, and *ἵστωρ* in time coming to have the *spiritus lenis*) In a few cases *υ* (*F*) seems to have been hardened or strengthened to *β*, e g the Laconian forms, *βέτος*=*ἔτος* (cp Latin *vetus*, *veter-nus*), *βέργον*=*Fέργον*, and *βούλομαι*, with its various forms, *βόλλομαι* (Aeolic), *βώλομαι* (Doric), the original consonant of which may have been *υ* (*F*), cp. *vol-o*, Sclavonic *vol-i-ti* (inf), Gothic *vil-jan*, German *willen*, English *will*; for here the evidence of so many languages for the *v* sound prevents us from regarding Latin *v* as a weakening of *β* The occasional confusion between *b* and *v* in Latin, and the representation (chiefly in Plutarch, a Boeotian Greek, and an indifferent Latin scholar) of Latin *v* by Greek *β*, has been pressed as an argument against the pronunciation of Latin *v* like *w*, and in favour of the labial sound of English *v*. Even in Plutarch, however (1st cent A D), *ου* is almost twice as common as *β* for Latin *v* (*Οὐαλήριος*, etc), in Dionysius of Halicarnassus (Augustan age) *β* is only occasionally found, while in Polybius (2nd cent B C.) *ου* is the regular equivalent for *v*. It seems therefore highly probable that the transliteration of *v* by *β* is connected with a dialectical tendency to confuse *v* and *b* in Latin, which appears in rare cases like *ferveo*, *ferbui*, and afterwards more commonly on inscriptions of the 2nd century A. D. and onwards. The *v* in all such cases was

---

[1] Roby, 'Latin Grammar,' § 193

[2] On the pronunciation of *u* consonantal (*v*) see Wordsworth, 'Fragments,' etc, Introd iii §§ 10–15; Roby, 'Latin Grammar,' Preface, pp xxxii–xlii.

[3] E g. those of Boeotia, Phocis, Locris, Laconia, Argos, Corinth, Cor-

---

cyra, etc (Kirchhoff) The Romans, taking a Doric alphabet (see p. 46), found this character, but changed its value, thinking the *w* sound sufficiently represented by V.

possibly the 'labial *v*[1],' passing irregularly but not permanently into *b*. and the safest conclusion from the evidence of transliteration appears to be that Latin *v* generally = *w*, but sometimes dialectically a labial *v*[2]. The substitution of μ and γ for ϝ is also assumed in a few cases, of very uncertain etymology; e g μόσχος, ὄσχος, ἀμφήν, αὐχήν, μέλδομαι, ἔλδομαι, etc.

In Latin, just as *y* is represented by *i* (consonantal), and sometimes disappears (e g. in *min(i)or*, *ero* = *esio*), so *v* is represented by *u* (consonantal), and sometimes disappears as in *s(v)ibi*, *t(v)ibi* (roots *sva-*, *tva-*) It is also occasionally represented by *f*, e g *frango*, ϝρήγνυμι; *frigus*, ϝριγέω, and the sign F is of course the old digamma, adopted by the Latins, but to denote a different sound

(*d*) Changes of the *Aspirates*, especially the aspirated mediae *bh*, *dh*, *gh* in Latin General rules —These aspirates (*gh*, *dh*, *bh*), when they occur in the middle of a word, are generally represented by the corresponding unaspirated letters, when initial they can all be represented by the single sound *f* This sound is not itself an aspirate, and has e g no power of assimilating a preceding nasal like the other mutes in Latin (*in-ficio*, but *im-petus*), so that it may be different in sound from Greek φ (ἐμφαίνω) Priscian's account of the difference between the two, that *ph* is pronounced 'fixis' and *f* 'non fixis labris,' is explained by some to mean that *ph* is an explosive or momentary, *f* a fricative or protracted, sound. If this be true, *f* must be considered as only a *spirant* or *breathing*, pronounced with a strong breath, and taking the place of *h* strongly sounded after *b*, *d*, *g*, the distinction between these letters being obscured, and only one part of the respective combinations *b*+*h*, *d*+*h*,

---

[1] Labial (as distinguished from labiodental or English) *v* is formed by bringing the outer edges of the lips together, while the voice escapes laterally This sound is said to be heard in Central Germany (e g in *weg*), and in Spanish *b*, and modern Greek β (Peile, ch iv p 80 3rd ed).

[2] For an admirably full discussion of the pronunciation of Latin *v*, see Roby's 'Latin Grammar,' vol i., Preface, pp. xxxii-xlii, and cp Peile, ch viii. pp 355-357 Corssen ('Aussprache,' i p 310 sqq.) maintains that *v* had not a 'weak vowel sound like English *w*, but a consonantal tone like German *w*'—meaning the labiodental sound of English *v* He much exaggerates, however, the extent to which β represented Latin *v* (see Roby, *l. c*).

g+*h* being retained. At the beginning of a word the first part of each fell away, leaving only the latter under the form of *f* (or *h*) in the middle of a word, Latin generally retained the first part and the latter or aspirate fell away We thus have *f*=*bh* in *fari*, root *bhâ*, whence φάναι; *fui*, root *bhu*, whence *-bo*, *-bam* of future and imperfect *f* = *dh* in *firmus*, root *dhar*, *fores*, root *dhvār*, whence Sanskrit **dvāra**, Greek θύρα, German *Thur*, English *door* · *f*=*gh* in *fa-mes*, χα-τίς (Sanskrit ja-hā-mi), *fons*, root *fu* = Greek χυ in ἐ-χύ-θην and forms of χέϜω, = originally *ghu*, cp. Gothic *giutan*=German *giessen* (whence 'Giessbach' the name of a waterfall), *formus*, 'warm'=Sanskrit **ghar-mas**, Greek θερ-μός; *fel*=Greek χολή *f* also=Greek θ in *femina*, θῆλυς, *fera*, θήρ, and in other words, in some of which however it and the θ may represent an original *dh*, as in *fores* In some cases, side by side with the form in which the aspirate has sunk to *f*, is found another with *h*, used in the classical dialect, thus *haedus*, Sabine *foedus* [originally *gh*, the *g* remaining in '*goat*'], *hariolus*, Sabine *fariolus* (Greek χορ-δή) So *hircus*, *fircus*, *hostis*, *fostis* (root *ghas*, in Gothic *gas-t-s*, English *guest*) and *fordeum*, *foedos*, attributed by Quintilian (1 4 14) to the old Romans.

F occurs most frequently as representative of *bh*, with which it has the labial element in common, less often of *dh*, with which it has only the use of the upper teeth in common; least often of *gh*, with which its only connection appears to be, as already mentioned, the strong breath with which it and the *h* of *gh* were each pronounced

(2) Loss of Consonantal Sounds —

(*a*) Initial sounds. *s* and *v* (Ϝ) are most frequently subject to loss in both Greek and Latin, especially before the nasals *m*, *n* and liquids *l*, *r*. Thus μέριμνα, cp. Sanskrit **smar-â-mi**, 'I remember,' νυός, cp. Old High German *snur*; ῥέω, root ρυ=σρυ (the *s* appearing in *stream*, *strom*, etc., and in the first ρ of ἔρρευσα, ἐρρύην, etc. by assimilation from ἔ-σρευ-σα, ἐ-σρύ-ην); show a loss of initial σ in Greek. In Latin, again, no native word begins with *sm*, *sn*, or *sr*, and even borrowed words sometimes lose the *s*, e.g. *myrrha*=σμύρνα; cp. *funda*, σφενδόνη, *fides* (a string), *σφίδη*, *fallo*, *σφάλλω*, etc.[1] *υ* (*Ϝ*) is lost before *ρ* in *ῥίζα* (German *Wurzel*, English *wort*), and *ῥήγνυμι*, Latin *frango* (where the *Ϝ* was a weakening of an earlier *bh*, traceable in Gothic *brikan*, English *break*), and before vowels in all cases where it has not passed into the *spiritus asper*—e. g. *οἶνος*, *vinum*, *οἶκος*, *vicus*, *ἔργον*, *work*, *ἰδ-εῖν*, *vid-ere*, etc., etc.

Loss of other consonantal sounds, when initial, is generally 'sporadic,' i. e. confined to stray instances, which do not offer sufficient evidence of any general phonetic tendency—e. g. the loss of *c* in *ubi*, *unde*, preserved in *ali-cubi*, *ali-cunde*.[2]

(*b*) Medial sounds are rarely lost in Greek, except in avoiding difficult or impossible combinations of sounds, such as would be *τετυφ-σθε*, *ἐσταλνται* (Ionic *ἐστάλαται*). The notion that *τ* falls out in the oblique cases of certain nouns, e. g. *κέρα*(*τ*)-*ος*, and in the 3 sing. of verbs (*τύπτει*=*τυπτε-τι*)[3], is no longer regarded as a probable explanation. In Latin, medial sounds are more often lost. Corssen and Schleicher give a number of examples of such loss, chiefly before spirants and nasals, e. g. *miles* = *milits*, *cesor cosol* = *censor consul*, *ma*(*g*)-*ior*, *pe*(*r*)-*iero*, *re*(*s*)*mus*=*retmus*, Greek *ἐρετμόν*, *exa*(*g*)-*men*, *de*(*c*)-*nus*, *po*(*s*)-*no* (cp. *pos-ui*). Before momentary sounds such loss is rare except before dentals—e. g. *tor*(*c*) *tus* (*torq-ueo*), *ul*(*c*)-*tus*, *ju*(*s*)-*dex*, *i*(*s*)*dem*. Schleicher considers that in all or most of these and similar examples the lost letter has first been *assimilated*, and then omitted, from the practice in old Latin of not writing the same consonant twice[4] e. g. *res-mus*, *rem-mus*, *remus*: an ingenious attempt to bring under a uniform rule a number of scattered examples, which may or may not be true, but is hardly capable of proof.

(*c*) Loss of Final Sounds, i. e. of the consonant or consonants of the final syllable. The tendency of many languages to throw back the accent from the final syllable, gave this syllable a weaker pronunciation, and made it liable to phonetic corruption, the extent of such corruption varying in different languages with the inability to accent the final syllable. Thus in Latin, which never accents the final syllable, there is more extensive loss of final consonantal sounds than in Sanskrit or Greek: just as we have already seen that its final vowel sounds are peculiarly liable to corruption, either by the shortening of sounds originally long, or by total loss. The operation of this common tendency to weaken or drop difficult sounds in final unaccented syllables varies with the phonetic laws of individual languages by which certain final sounds are accepted or rejected The Greek ear, for example, allowed no consonantal sound to end a word but *ν*, *ς*, and less frequently *ρ*, the only exceptions being *οὐκ* and *ἐκ* (*ξ* or *ψ* of course include *σ*) and when any other consonant appears etymologically at the end of a word it is usually rejected—e g. *μέλι*= stem *μελιτ*, as seen in *μέλιτ-ος*, *σῶμα*=*σωματ-* (*σώματ-ος*), *ἦσαν*, Latin *erant*, and all participles in *-ων*, the stem of which is *-οντ*, as in oblique cases *τύπτοντ-ος*. In Latin *-nt* is an admissible final sound (*amant*, *erant*, etc), though in participles *t* is changed to *s* in the nominative sing (*amans*, *amantes*) and the different treatment in the two languages of this participial stem termination *-nt* is a good illustration of the direction given to general tendencies of phonetic change by the phonetic laws of individual languages. The paucity of admissible final sounds in Greek leads also to corruption of the final syllable even when accented, e. g. *τιθείς*=*τιθεντς*. In Latin, as has been shown, the tendency is for the final *vowel* to sink to a uniform sound of *e*, but there is considerable variety of consonantal termination: *s*, *m*, *t*, *r*, *c*, *d* being all found, besides many combinations impossible to Greek (which avoids the accumulation of consonants at the end of a word), e g in *ferunt*, *hunc*, *volt*, *fert*, *scrobs*, *ars*, *puls*, *hiemps*. Almost any combination, in fact, that could be pronounced was allowed, with the exception of double consonants (e. g. *oss-is*, but nominative *os*; *fellis*, *fel*) or two explosive mutes, e. g. *lact-is*, *lac*; *cord-is*, *cor*. As far then as the language of the classical Roman writers is concerned, there is less deterioration of final consonantal sounds than in Greek: but there is good reason for supposing that in the pronunciation of ordinary life, in the spoken language of which the plays of Plautus and Terence are the chief written representatives, 'neglect of final sounds[1]' was more the rule than the exception, so much so, that upon old inscriptions they are often actually omitted. This is most often the case with the most common final letters *s, m, t* The case of final *s* has already been noticed (p 67) under the changes of spirants.

---

[1] Corssen ('Kritische Beitrage,' p. 428) suggests that *Roma*=*Srouma* (root *sru*), the 'stream-town,' a term applicable to the old 'Roma quadrata' on the Palatine Hill, before the Tiber was kept within its banks. This of course is but one among a number of competing etymologies for the name.

[2] Other examples are given by Peile, ch. viii. pp. 370–1, and Corssen ('Kritische Beitrage,' pp. 2, 57–64, 142).

[3] See below, ch. viii.

[4] On double consonants in Latin, see above.

Final *m*, as is evident from its regular disregard in Latin poetry, must have been weakly pronounced, and this is confirmed by the statements of grammarians, and the evidence of early inscriptions, on which we find such forms as *oino* (*unum*), *viro* (*virum*), etc (cp Appendix I. Inscr. 1 2), and *dono dedit=donum dedit* The omission is however rare in *legal* inscriptions, where greater accuracy was desirable, and in others after 130 B C, when literature began to insist on precision of grammar and form, but is found in the vulgar wall inscriptions at Pompeii, and towards the end of the third century A. D becomes frequent again. The Italian forms *meco, dieci* (*mecum, decem*) and the like, show how completely it must have become ignored in pronunciation in the later Empire and the history above sketched of its appearance on inscriptions shows how the natural tendency of pronunciation towards phonetic decay was checked for a while during the predominance of a classical literary dialect, only to assert itself more completely in the end.

(3) Consonantal Change—Assimilation.

Sounds which require very different positions of the vocal organs, or which are respectively *tenues* and *mediae* (see above, ch iii. p 32) are obviously difficult to pronounce close together, and when two such incompatible sounds would otherwise come together, the principle of euphony operates to produce such a change in one or the other of the two sounds as will make them easy to pronounce in close contact. These changes are included under the general head of 'Assimilation,' by which is implied the change of one of two neighbouring sounds to a sound either the same as or sufficiently like the other to be 'compatible' with it, and therefore easy of pronunciation in close contact It may indeed happen that the recurrence of the *same* sound twice is unpleasant to the ear, in which case euphony requires 'Dissimilation,' or change to a sound different from, but compatible with, the sound whose repetition offends. but as there are naturally but few cases in which such repetition of the same sound is unpleasant, Dissimilation plays but a limited part in phonetic change

---

[1] See Wagner, Introd. to *Aulul.*, pp. xxix-xxxv, and my Introduction, IV. to Terence, *Andria.*

Assimilation is either (*a*) of the first sound to the latter (*regressive* assimilation), or (*b*) of the second sound to the first (*progressive* assimilation), or the two sounds pass into (*c*) a third (doubled) sound, or (*d*) into a single letter It is also (1) complete, where the assimilated letter becomes the same as the other, (2) partial or incomplete, where it passes into a similar sound

Regressive assimilation preponderates in Indo-European languages progressive assimilation in Ural Altaic (Turanian) languages This difference is ascribed by some (e g Sievers, 'Lautphysiologie,' p 137) to the difference of accentuation in the two families, Indo-European in its earliest stage mostly accenting the final syllable, Ural-Altaic the first syllable of a word

(1) Complete Assimilation —

(*a*) Of the first to the second sound —In Greek *σ* to *ν* or *μ*, e.g *ἕννυμι*=*Ϝἔσ-νυμι* (*ves-tis*), *ἐμμί* (Aeol)=*ἐσ-μί*, *ἄμμες* (Dor and Aeol.)=*ἄ-σμες*=*ἡμεῖς*. labials to nasals, *ὄμμα*=*ὄπ-μα*, *γράμμα*=*γράφ-μα*, *τέτυμμαι*=*τέτυφ-μαι* nasals to liquids (especially *σύν* and *ἐν* in composition)—*συλλαμβάνω*, *συρρέω*, etc So *ποσσί* (Epic)=*ποδ-σί*. In Latin[1] *summus*=*sup-mus*, *flamma*=*flagma* (*flagrare*), *puella*=*puer*(*u*)*la*, *esse*=*ed-se* (*edo*)· and so with prepositions in composition *ad* in *appello*, *aggero*, etc., *ob* in *occurro*, *officio*, etc. *sub* in *summoveo*, etc., *ec*-(*ἐκ*) in *effero*, etc, *dis* in *diffugio*, etc., *com* in *corruo*, etc.

(*b*) Of the second to the first sound.—In Greek (chiefly in Aeolic forms): *κτέννω* = *κτενyω*, *ἔστελλα* = *ἐστελ-σα*, *ἔνεμμα* =

---

[1] Other examples are given by Roby. 'Latin Grammar,' § 34.

ἐνεμσα. In Attic *ἵππος=ἰπϜος*, cp. *ἴκκος=ἰκϜος* (Sanskrit **açvas**) In Latin *issimus=is-tumus*[1] so *celerrimus, facillimus=celer-timus, facil-tumus* *ferrem, vellem=fer-sem, vel-sem*

(*c*) The two sounds pass into a (double letter) third sound. In Greek the sound *σσ* (or *ττ*)[2] seems in many cases to have arisen from the combination of the *y* sound with dental and guttural mutes (i. e from *τy, θy, κy, γy, χy*) Thus with dentals we have *κρέσσων=κρετ-yων* (*κράτ-ος*), *λίσσομαι=λιτ-yομαι* (*λιτ-ή*), *κορύσσω=κορυθ-yω* In these and similar cases the *y* probably, through influence of the preceding dental, passed into the dental sibilant *σ* (*s* in 'sits'), which then was either assimilated by, or assimilated, the preceding dental e. g *λιτ-yο-μαι* became *λιτ-σο-μαι*, which, by regressive assimilation, (*a*) became *λίσσομαι*, or by progressive (*b*) *λίττομαι* With gutturals, the *y* sound changed the guttural to a dental (Dentalism, see above, p 50), which then produced the result just described Thus *ἧσσων, ἐλάσσων=ἡκ-yων, ἐλαχ-ίων* (cp. *ἧκ-ιστος, ἐλάχ-ιστος*), *ἄνασσα=ἀνακyα, ὄσσα=ὀκyα, vox,* *πέσσω=πεκyω* (root *πεκ, coq*), and so with many verbs whose present tense ends in *-σσω*, but the stem in a guttural—e g *πράσσω*, (*πραγ-*), *φράσσω* (*φρακ-*, Latin *farc-io*), *πτύσσω* (*πτυχ-ή*), *ἀλλάσσω* (*ἀλλαγ-ή*), *κηρύσσω* (*κήρ-υκ ος*), *τάσσω* (*ταγ-ός*), *λεύσσω* (*λευκ-ός*), *πτήσσω* (*ἔπτακ-ον*), *ταράσσω* (*ταραχ-ή*)

In Latin the *t* of the suffixes *-tus* (participial) and *-tor* with the final letter of the root (especially if a dental) passes into *ss*, e g *fissus=fid-tus, cassus* (Cic)=*cad-tus, divissum* (Cic)= *divid-tum, fossor=fod-tor* As to the exact process of the change, there are two different views·—(1) Corssen, Schleicher, Curtius, and other leading philologists, assume that it is the result of *progressive* assimilation, the dental of the root being first weakened to *s* (because the Roman ear did not tolerate two dental mutes coming together), and the following *t* assimilated to this *s*, the change of *t* to *s* in cases like *mer-sum, lap-sum*, etc., where there is no dental at the end of the stem, being due to false analogy. (2) The other view (expounded by Mr. Roby in the Preface to his Latin Grammar, pp. lvii–lxi) is that *tt*, *dt* became first *ts*, *ds*, and then *ss* or *s*; this second change being due to the fact that *ts*, *ds* were in Latin 'unstable' combinations likely to be soon changed, whereas *st* (the assumed result of the first stage in the process of change of *tt*, *dt* on the other view) is a perfectly 'stable' sound, easy to pronounce and very common in Latin, for any further change of which there would be no phonetic reason If, for example, *tond-tum* had (as on the other view) become *tons-tum*, this latter need have undergone no farther change (except perhaps to *tos-tum*, which in fact did result from *tors-tum*, the supine of *torreo*, stem *tors-*)[1] Other arguments urged against the first view, are (*a*) that it does not account (except on the arbitrary supposition of 'false analogy') for the supine in *-sum* from stems ending in *lg*, *rg*, *ll*, *rr*,—*cursum* (*curr-o*), *mul-sum*=*mulg-tum*, etc, and from a few other verbs (*labor*, *jubeo*, *premo*, *maneo*, *haereo*, etc) whose perfect active is found with *-si* (*b*) that the *progressive* assimilation which it supposes, though possible, is very rare in Latin, (*c*) that stems originally ending in *s* do not follow the prescribed change from *st* to *ss* e g. *ges-tum* does not become *gessum.*

---

[1] On this and a rival explanation see below, ch vi

[2] On the origin of *σσ* (*ττ*) see Peile, ch viii pp 387-390 A fuller, but (the book being out of print) less accessible discussion of the point is given by Curtius, 'Tempora und Modi,' pp 99-110 (on the formation of verbs in *-σσω, -ττω*).

(*d*) Two sounds coalesce into one letter in Greek, when dental and guttural mediae (δ, γ) are followed by *y* e. g. ἕζομαι =ἑδ-yο-μαι (root *sed-* as in Latin), ὄζω (root οδ-), σχίζω=σχιδ-yω (cp. Latin *scid-* in *scindo*), Ζεύς=Δyευς, Sanskrit **Dyāus** ζ is thus a compound letter=δy and then δs, s being the weak sibilant (*z*), and hence in prosody lengthens a preceding short vowel As with κy (see above, p. 75) so γy became δy, and this ζ thus σαλπίζω=σαλπιγ-yω, σφάζω=σφαγ-yω (stem as in 2 aor. ἐσφάγ-ην), πεζός is πεδ-ιός, ῥίζα is Ϝριδya, φράζω is φραδ-yω (πέ-φραδ-ον) In the Boeotian dialect *y* was assimilated to δ, producing δδ—e. g. φράδ-δω, σαλπίδδω—or δ initial, Δεύς, Ζεύς.

(2) Incomplete Assimilation —

(*a*) Where the two sounds only approximate to each other, the change not being so fully carried out. This includes

---

[1] Mr. Peile (Introduction, p. 396) prefers this view to Corssen's.

(*a*) all those 'euphonic' changes by which the final letter of a root or stem is made to correspond with the first letter of a termination either as tenuis, media, or aspirate—it being easier to sound two tenues, two mediae, or two aspirates together Thus in Greek before dental tenues, mediae, or aspirates (*τ*, *δ*, *θ*) only tenues, mediae, or aspirates respectively of other organs can stand; and the only allowable combinations are *κτ*, *πτ*, *γδ*, *βδ*, *χθ*, *φθ* Consequently we have from *πλέκω*, *πλεχθῆναι* not *πλεκθηναι* from *λέγω*, *λεκτός* not *λεγ-τος*, *λεχθῆναι* not *λεγθηναι* from *δέχομαι*, *δεκτός* not *δεχτος*: from *γράφω*, *γραπ-τός* not *γραφτος*, *γράβδην* not *γραφδην*. So in Latin from *ago* we have *actus* not *ag-tus*· from *traho*, *tractus* not *trah-tus* from *lego*, *lectus* not *leg-tus* In most of these cases, actual pronunciation of the words will make the phonetic reason for the change clear.

Before the tenuis *σ*, *γ* and *χ* become *κ*, and *β* and *φ* become *π* *κσ* is then written *ξ*, and *πσ*, *ψ* Thus from *ἄγω*, *ἀγ-σω* becomes *ἀκσω* (*ἄξω*), cp *recsi* (*rexi*)=*reg-si* from *rego*: *δέχομαι*, *δεκ-σομαι* (*δέξομαι*), cp *traxi*=*trah-si* from *traho* and so too with the futures of *τρίβω* and *γράφω*, or perfect of *scribo*

(*b*) Nasals often influence the preceding sound Thus in Greek before *μ* a *guttural* tends to become *γ*, a *dental* to become *σ* (the dental spirant) So we find *διωγμός* not *διωκ-μος* (*διώκ-ω*), *βέβρεγμαι* not *βεβρεχμαι* (*βρέχω*), *ἴσ-μεν* (Attic) for *ἴδ-μεν* (√*Fιδ* of *οἶδα*), *ἤνυσ-μαι* not *ἤνυτ-μαι* (*ἀνύτω*), *πέπεισμαι* not *πέπειθ-μαι* (*πείθ-ω*) A labial before *μ* becomes *μ* by complete assimilation (see above, p. 74) In Latin *som-nus*=*sop-nus*, *Samnium*=*Sab*(*i*)*nium*. Nasals again are affected by a following consonant: thus in Greek *ν* before gutturals becomes the guttural nasal *γ* (*συγκαλέω* for *συν-καλέω*), and the labial nasal *μ* before labials (*ἔμπειρος*, *ἔμψυχὸς*), before liquids, as we have seen, it is completely assimilated (p 74). So in Latin *n* before a labial mute or nasal became *m* (*impello*, *imbuo*, *immotus*), though this tendency of pronunciation did not at once affect the orthography of classical Latin[1].

---

[1] On this point see Munro's 'Lucretius,' Introd. to Notes, I. (vol. ii. p. 26, 1st ed.).

(c) The change of *τ* to *σ* before *ι* in all Greek dialects but Doric [e. g. in 3 singular *-τι*, *φησί*, Doric *φατί*, cp *ἐστί*, in abstract substantives in *-σι-ς=τι-ς*, *φάσις*, Homer and tragedians *φάτις*, when suffix *ya*, *ιο* follows *τ*, e g *πλούσ-ιος* from *πλοῦτ-ος*, *ἐνιαύσιος*, *γερουσία=γεροντ-ια*, and in forms like *εἴκοσί*, Doric *Fίκατι*, Sanskrit **vinçati**, Latin *viginti*, and 3 plural *φέρουσι=φερονσι=φέροντι* (Doric)] is perhaps a case of assimilation, occurring first in cases where *i* with a vowel following represented the semi-vowel *y* sound (e. g *πλούσιος=πλουτ-yo-ς*) and exercised an assibilating influence upon *t*, and then extended to all cases of *τ* followed by *ι*, in a preference for the softer sound *σ* A similar change of *θ* to *σ* before *ι* in the Laconian and Boeotian dialects is evidenced by Aristophanes (Lysistrata 86 *ναὶ τὼ σιώ*, cp also Ach 906). Similarly in late Latin, and in the modern languages derived from it, *i* following *t*, *c*, *d*, *g* assibilated the preceding consonant, so that by the seventh century A D *-tio*, *-cio* were both pronounced *-sho* (whence our pronunciation of words like *nation*, *musician*) The Italians, again, pronounce *ci* like English *ch*, *gi* as *j*, and have *Marzo* from *Martius*, *palazzo* from *palatium*, *mezzo* from *medius;* while the French have assibilated *c* before other vowels also, e g *chambre* from *camera* This assibilation of *ci*, *ti* is sometimes assumed to have taken place in classical times, from the confusion between *-cio* and *-tio* found in the MS spelling of such words as *condicio,* this confusion being further applied as an argument for the soft pronunciation of Latin *c* before *i*[1]. But this variety of spelling in MSS is due partly to doubts as to etymology, partly to the assibilation of *ci*, *ti* in popular pronunciation at the time when the extant MSS. were written Inscriptions (by far the most trustworthy guide in orthography) show no such variety of spelling till comparatively late times, the change of *ci* and interchange of *ci* and *ti* not appearing much before the seventh century A D, and then chiefly in Gallic inscriptions. The change of *ti* (to *si*) was earlier and more general in the vulgar Latin and other

---

[1] Roby, 'Latin Grammar,' Preface, pp. xlviii-l; Wordsworth, 'Fragments,' Introd. iii. §§ 23-26.

Italian dialects, but (according to Corssen, who has gone most elaborately into the evidence[1]) it was not established in the speech of educated Romans till the fourth century A D., though traceable much earlier in isolated forms, e g *Acherunsius* for *Acheruntios*, *Hortensius* (in old Latin *Hortentius*), and many names of towns in *-usio*, *-esio*, cp. with others in *-entio*, *-untio;* compare also *viciens* from *vicesiens* = *vicensiens* for *vicentiens*. There is no variety, in the most trustworthy inscriptions of earlier periods, in the spelling of such words as *dicio*, *condicio*, *solacium*, *patricius*, *tribunicius*, *contio*, *nuntius*, *indutiae*, *otium*, *negotium*, *setius*

(4) Dissimilation.

Dissimilation, or the euphonic change of one of two *similar* sounds whose concurrence displeases the ear, is, as has been said, of comparatively rare occurrence. One regular case in both Greek and Latin is the change of a dental mute before another dental mute at the beginning of a suffix, *ττ*, *δτ*, and *θτ* becoming *στ*, *τθ*, *δθ*, *θθ* becoming *σθ* Thus ἀνυστός=ἀνυτ-τός (ἀνύτω), ἵστωρ=Ϝιδτωρ, πιστός, πεισθῆναι=πιθτός, πειθ-θῆναι in Latin *claustrum* = *claud-trum*, *equester* = *equit-ter*, *est* = *ed-ti* (*edo*) In Greek, again, one of two aspirate sounds close together is often dissimilated e g. θι-θημι becomes τί-θημι, ἐ-θυ-θην becomes ἐτύθην, and -θι of imperative κλῦθι becomes τι from the preceding aspirate in τύφθητι, σώθητι. In the reduplicated syllable of verbs beginning with two consonants, the consonant sound is lost (e g ἔκτονα for κέ-κτονα, ἔγνωκα for γεγνωκα) probably from the tendency to Dissimilation. Lastly, in Latin the termination *-alis* is changed to *-aris* when an *l* precedes e g *mortalis*, *lateralis*, but *puellaris*, *popularis*, *volgaris*, and *Parilia* a variety of *Palilia* (*Pales*).

Besides the changes which result in the substitution of a weaker for a stronger sound, there are others which seem to be due to *indistinctness* of utterance, in the pronunciation of words without sufficient clearness and sharpness to give each letter its proper sound. 'In this case,' says Mr. Peile, 'no other recognised letter is at first heard; but an indefinite amount of indistinct sound is produced after the letter thus slurred; which in time, if this relaxed pronunciation become common, often takes the form of the nearest sound in the existing alphabet. Thus two letters grow out of one, and a word is often actually increased.' As examples of this introduction of additional sound through indistinct pronunciation, we have (following Peile's enumeration), (1) 'Labialism,' the change from *k* to *p*, (2) 'Dentalism,' the change from *k* to *t* [for both these phenomena see above, pp. 50, 51] (3) The insertion of a parasitic *d* before *y* or *i*. *dy*, we have already seen (p 76), becomes ζ by partial assimilation of *y* to the weak dental spirant *z* and when we find in Greek ζυγ-όν, but in all the cognate languages *y* of root *yug* or its regular substitute, the conclusion seems warranted that somehow or other a *d* sound, not radical, became heard before the *y*, and that thus this combination *dy* was avoided by passing to ζ, as in the cases already noticed. Curtius ('Griechische Etymologie,' p. 551 sq second edition) gives examples of various forms arising, as he thinks, from the combination of *y* with a parasitic *d* arising from indistinct articulation · e g (*a*) ζ in ζυγόν, in ζημία (root *yam*), in ζωμός and ζύμη (Sanskrit **yūsha**, Latin *ius*), in none of which is δ radical The double verb forms -αζω, -αω are also explained by Curtius on the same principle. -αω being a variation from *ayω* with the loss of *y*, it is assumed that before *y* fell out it may have given rise to a parasitic δ—a very ingenious and not impossible explanation. (*b*) δι, in the adjectival termination -διο-ς, which Curtius regards as arising from the common -ιο- or -*yo*-; this termination -διο- being always preceded by a vowel, after which the sounds ιο would be difficult to pronounce clearly (Others, however, consider that -διο- is weakened from original -τ*yo*- · and the etymology is at best very doubtful) The same applies to a few terminations in -δεος, e g. ἀδελφι-δέος, where δ is not radical, but an original τ*yo* might also be assumed. (*c*) *dy* loses the original *y*, so that parasitic *d* only remains, e. g. in the Boeotian δυγόν for ζυγόν, ἱεράδδω for ἱεραδ*y*ω (ἱεράζω), or ἱερα*y*ω (ἱεράω) δυγόν is strong evidence for the theory of the rise of ζ in ζυγόν: but we can hardly feel enough certainty either as to original form or meaning to pronounce a verdict upon other cases to which Curtius applies his theory—e.g the particles δή, δήν and suffixes -δε and -ζε as modifications of (δ)*y*ε from the pronominal root *ya*; or adverbs in -δον, -δην, -δα, patronymics in -δα, and nominal stems in -αδ- or -ιδ-, as arising from the adjectival suffix *ya*(ιο) with a parasitic δ The rarity however of *d* and great frequency of *y* as an element in stem-formations of Indo-European languages make it difficult to find any other way of harmonising these Greek forms with those of kindred languages and it is fairly urged by Curtius and his supporters that a process which every one allows in some cases (e g ζυγόν and δυγόν, cp. with *iug-um*) is at least possible in others[1].

---

[1] 'Ueber Aussprache,' etc., i. pp. 46–67.

(4) The aspiration of unaspirated letters (in words where none of the cognate languages exhibit an aspirate or its substitutes) is found to some extent both in Sanskrit and Greek, a parasitic *h* being produced, most commonly by influence of an adjoining nasal or liquid or preceding σ, as in ὁδός, κλεῖθρον (the suffix -τρον), τέφ-ρα (Latin *tep-eo*), λύχ-νος (λυκ-, *luc-eo*), ἐξαίφνης (ἐξαπίνης), σχίζω (*scid* in *sci*(*n*)*do*), and perhaps σθέ-νω (if a strengthened form of *sta* which in Sanskrit becomes *stha*) In other cases no cause for the change is apparent beyond mere laziness operating irregularly, and affecting only some words permanently, e g βλέφαρον, σοφός, σαφής (*sap-* of *sap-io*) In Latin the aspirates had early disappeared, but irregular aspiration at the beginning of a word seems to have been known both in Latin and Greek Both peoples left out the aspirate where it ought to begin a word, and in both there was a tendency to replace it where it had no right to be, just as in vulgar English the *h* is often regularly dropped, and almost as regularly inserted before a vowel where it is not required. There seems to have been a tendency in Greek to aspirate an initial υ, e g. ὕδωρ, ὑπό, ὕστερος, a tendency which is intelligible if we suppose the sound of υ to have been something like German *u*, which is difficult to pronounce without a breath

---

[1] Examples of a similar phenomenon in other languages are—Italian *diacere, diacinto, maggiore* (from Latin *jacere, hyacinthus, major*), Modern Greek διάκι (οἰάκιον), Gothic *daddja* (O H. G. *tajû*; Skt. dhayâmi).

slipping out before it. The Aeolic ἄμμες (ἡμεῖς) is probal right ἡμεῖς resting on a false analogy from ὑμεῖς, where ʽ rep sents *y*. In other cases, e g ἵππος, cp with ἴκκος, *equus*, et ἕως in Attic Greek (other dialects having smooth breathing ἁμαρτεῖν (Attic), cp with ἤμβροτον (Epic), there seems nothi to account for the aspirate, which is perhaps due to mere mistak

In Latin the insertion of *h* was of later date, never bein found, according to Corssen, upon Republican inscription After *p*, *c*, *t*, *r* it occurs chiefly in Greek words, but not befo 100 B C and not generally before 50 B C About this perio there appears to have begun a tendency to insert in pronuncia tion, and also in writing, a superfluous *h*. thus Cicero (Ora 48, § 160) says that at one time he spoke as the old Roman did, *pulcros*, *Cetegos*, *triumpos*, but afterwards conformed t the ordinary practice and said *Pyrrhus*, *Phryges* (not as Enniu wrote, *Burrus*, *Bruges*), but still *sepulcra*, *coronas*, *lacrimas* etc Catullus wrote a well-known epigram (lxxxiv ed Ellis) ridiculing the pronunciation of *chommoda*, *hinsidias*, etc. and according to Quintilian (I O 1 5, 20) some inscriptions in his time had *choronae*, *chenturiones*, *praechones* In late inscriptions (fourth century A D and onwards) the utmost irregularity is seen, *h* being omitted and inserted almost at random, e g *hac* (*ac*), *hornat*, *hextricata*, *haditus*, *hauctoritas*, *omini*, *abitat*, *inospita*, from which we infer great confusion and uncertainty in the use of the aspirate in the ordinary pronunciation of those who cut the inscriptions Finally in modern Italian the *h* is not sounded at all

In MSS. of the best classical authors and in the writings of grammarians there is a good deal of uncertainty in the spelling of particular words, the errors being more often in omission of *h* (from reaction, probably, against the tendency noticed by Cicero and Catullus). The preferable spelling, for example, of the following words is ***harundo***, ***harena***, ***heres***, ***holus***, ***hordeum***, ***haruspex***, ***hedera***, ***erus***, ***umerus***, ***umor***. but all these are constantly spelt otherwise in the best MSS [1]

(5) Auxiliary Vowels (prefixed or inserted).

---

[1] See Munro's 'Lucretius,' Introd. to Notes, I.

An auxiliary (inorganic) vowel, purely phonetic in its origin, is found most frequently before λ, ρ, μ, ν, and rarely before an explosive sound; never before τ, π, φ A protracted or fricative sound has something of a vowel character (see above, p. 32) about it, and it is therefore easy for a vowel to slip out before such a sound, whereas before a momentary (explosive) sound the vowel must be deliberately and consciously sounded This additional ('prosthetic') vowel is sometimes found at the beginning, sometimes in the middle, of a word; oftenest as *α* or *ε*, less often as *ο* or *ι*, seldom as *υ* Examples in Greek, (*a*) *initial*, *ἀ-στήρ* (cp Latin *stella=ster-ula*, Vedic Sanskrit **star**, German *Stern*, our *star*) *ἀ-σπαίρω* (an easier form of *σπαίρω*; *ἐ-λαχύς* (Sanskrit **laghu-s**, Latin *levis=legu-is*), *ἐ-μέ*, *ἐ-μοί*, cp with *με*, *μοι* (stem *ma*), *ἐθέλω*, *θέλω*, the Homeric *ἐϜέργειν*, *ἐϜείκοσι*, *ἐϜέρση*, etc.[1], *ὄ-νομα* (Sanskrit **nāman**, Latin *nomen*), *ὄμφαλος=ὀ-νάφαλος* (*navel*); *ὀ-δούς* (stem *ὀδοντ-*, Latin *dens*, Sanskrit **danta**) In these and similar cases (a limited number in all) the vowel seems to be merely phonetic, the result of careless articulation

(*b*) *Medial* Here the case is not always so clear, because he fuller form may sometimes be the older and have lost its vowel Thus ὀρέγω quoted by Schleicher (Comp § 46), as referable o a root *arg* with *ε* inserted, is as likely to be from a root *rag* Latin *reg-o*) with an initial prefix *ο* *ἀλ(ε)γεινός*, *ἤλ-υ-θον* (root λθ-), *ἀλ-έ-ξω* (*ἀλκή*, Latin *arc-eo*), are more probable cases. In he conjugation of many verbs we find a secondary stem formed. y the phonetic addition of *ε* alternating with the original stem. Sometimes the enlarged stem forms the present, the shorter tem the other tenses, as *γηθ-*, *γηθέ-ω*, *γέγηθ-α*, *δοκ-*, *δοκέ-ω*, *δέ-ογ-μαι*. sometimes *vice versa*, as *μαχ-*, *μάχ-ο-μαι*, *ἐ-μαχε-σάμην*, *χ-*, *οἴχο-μαι*, *οἰχή-σομαι* (Curtius' Greek Grammar, §§ 325, 6)

In Latin there is but little evidence of a vowel as a phonetic refix, *enim* (cp *nam*) and *e-quidem* (*quidem*) being almost the nly instances

---

[1] It is, however, possible that the *ο-* of *ὄνομα* may be part of the primi-ve root cp Irish *ainmu* and Old Prussian *emnes* suggesting an earlier rm *an-man*.

(6) Insertion of Auxiliary Consonants.

In Greek between *νρ, μρ, μλ*; *ἀν-δ-ρός*=*ἀνρος* (stem *ἀνερ-*); *μεσημβρία*=*μεσημρια* (*ἡμέρα*). *ἄμβροτος*=*ἀμροτος* (stem *μρο-*, Latin *mor-*), *μέμβλωκα*=*μεμλωκα* (stem *μολ-*) *βροτός* is for *μβροτος*=*μροτος*, *βλίττω* for *μβλιττω*=*μελιτ-yω*; in both cases the *β* is parasitic

In Latin *p* between *ms*—*hiemps, sumpsi*

In modern languages French *gendre* (*gener*), *nombre* (*numerus*), English *humble* (*humilis*), *Ambleside* (=*Hamal-seat*, *Hamal* being a Norse name), are examples of similar phonetic insertion of *b*, *d*

In the foregoing pages an attempt has been made to refer most of the changes of sound that have been noticed to one uniform principle, viz. the tendency to weak articulation and the desire to secure the easiest pronunciation But in tracing the operation of such tendencies it must be remembered that the difficulty of uttering a particular sound varies with different tribes and nations It varies, as we know, with different individuals sometimes from organic defect, sometimes from want of practice, and such varieties of pronunciation, unless deliberately corrected or successfully fought against, become permanent peculiarities[1]. Hence (to take examples from English) we have people who cannot pronounce *r*, who 'lisp' the sound of *s* as *th*, who pronounce *v* as *w* and *vice versa* And so with nations, certain sounds or classes of sounds are preferred or avoided[2], are more or less frequently or seldom pronounced and in this way, on the separation of different tribes from a common stock, the same words take different shapes among different tribes, the ambiguous or intermediate sounds being differently fixed or differently developed In Professor Max Muller's Lectures, Series II Lecture iv pp 171–183, etc., will be found a number of illustrations (*a*) of the absence or presence of certain sounds in the speech of particular nations, (*b*) of the different shapes which the same root exhibits in different languages, from which a few selections are here made.

---

[1] See Max Müller's 'Lectures,' II Lect iv

[2] Whitney, 'Life and Growth of Language,' p. 72.

(*a*) The dentals seem to be the easiest sounds; they are the most universally employed and are the first uttered by children. But it is said that the dental media *d* does not occur in Chinese nor in three American dialects. Again, some of the Polynesian (Turanian) languages have no gutturals, and some North American dialects no labials. while in the language of the Sandwich Islands the gutturals and dentals are indistinguishable. The *tenues* and *mediae* are not distinguished in the Polynesian dialects, and are often confused by the Welsh, who say *Tavit* for *David*, *pet* for *bed* Sanskrit shows many weakened forms of consonants, due perhaps in some measure to the effects of the enervating climate of India e. g. the palatal sibilant श (ç) which arises from careless pronunciation of **k** without bringing the root of the tongue firmly against the back of the palate, or the 'palatal' sounds च, ज (c, j) which are weakenings of **k** and **g** respectively. Sanskrit has the aspirated mediae **gh, dh, bh,** which were difficult sounds to most other Indo-European nations (see above, p 34) Greek retains the aspirated tenues χ, θ, φ Latin has neither The comparative peculiarities of Latin and Greek with respect to final sounds have already been noticed (p 72)

(*b*) The variation of the same root in different languages may be illustrated by 'Grimm's Law' of regular interchange between (1) Sanskrit, Greek, and Latin taken as one group, (2) Gothic and Low German dialects (including English), (3) High German and its stock (including modern German), the one having an *aspirated mute* (or fricative representing the aspirate) where the second has a *media* and the third a *tenuis* The following formula will express this law.—

	I.	II.	III
(1) Sanskrit, Greek, Latin .	Aspirate	Media	Tenuis
(2) Gothic and Low German. .	Media	Tenuis	Aspirate
(3) High German, etc.. . . .	Tenuis	Aspirate	Media

The following table gives a simple illustration of its working; *initial* letters being taken as freest from the influence of neighbouring consonants, and *dentals* as offering the most regular illustration Fuller illustrations are given in the table below, p. 91:—

I.					
1 Greek θ .	θυγάτηρ	θήρ	θύρα	μέθυ	
1 Latin f .		*fera*	*fores*		
2 English d	*daughter*	*deer*	*door*	*mead*	
3 German t or $th=t$	*tochter*	*thier*	*thor*	*meth*	
II					
1 Greek δ .	ὀδούς	δαμᾶν	δύο	ἔδειν	ὕδωρ
1 Latin d .	*dens*	*domare*	*duo*	*edere*	*unda*
2 English t	*tooth*	*tame*	*two*	*eat*	*water*
3. German z or s[1]	*zahn*	*zahmen*	*zwei*	*essen*	*wasser*
III					
1 Greek τ. . . .	τύ (σύ)	τρεῖς		τό	
1 Latin t	*tu*	*tres*	*tenuis*	is*tud*	*frater*
2 English th	*thou*	*three*	*thin*	*that*	*brother*
3. German d .	*du*	*drei*	*dunn*	*das*	*bruder*

The principal exceptions to this law of change are thus classed in Ferrar's Comparative Grammar, pp 34–38

1. Onomatopoeic and imitative words, and natural sounds: e.g ὑλακτῶ, English *howl*, German *heulen*, κλαγγή (Latin *clango*), English *clank*, *clatter*, etc., Old Norse *klaka*, μάμμη, ἄππα, (*mamma*, *papille*), English *mamma*, *papa*, German *Amme*, (from the natural sounds *ma*, *pa*), Sanskrit **tāta** (dear), Greek τέττα, τίτθη, etc, English *tit*, *teat*, Old High German *tutto* (breast)

2 Borrowed words, in which the sound of the original language was naturally retained.

3. Regular exceptions in the consonantal groups *sk*, *st*, *sp* Thus in Latin *stella*, English *star*, German *Stern*, the *st* sound is identical; the hard *s*, in fact, not being easily pronounced with any sound but a hard one.

4. Where sounds have been irregularly changed within the same language. Thus the change from Sanskrit **dvāra** to

---

[1] So a Greek aspirate frequently corresponds to Latin *s* (see above, p. 66).

English *door*, German *Thor* (Old High German *tor*), would be exceptional, did not *θύρα*, *fores* show that *d* of **dvāra** represents an original aspirate *dh* So in Sanskrit **budhna** (root), (English *bottom*, Old High German *bodam*), *b* represents *bh* of Indo-European *bhudhna*

The process of this 'Lautverschiebung,' or Dislocation of Consonants, between the languages in question, is thus traced by Professor Max Muller (Lectures, Series II Lecture v).

1 The physiological analysis of sound shows, at each of the three points of consonantal contact, four possible varieties of pronunciation—viz a *hard* sound (tenuis), or a *soft* sound (media), or aspiration by an audible emission of breath immediately after utterance of the hard or soft sound Thus we have —

Guttural	k, kh, g, gh
Dental	t, th, d, dh
Labial	p, ph, b, bh

2. The development of, and maintenance of, the distinction between these varieties of articulation is characteristic of the increasing development of languages, in which new ideas are constantly requiring expression, and the phonetic organs are consequently driven to new devices which gradually assume a settled and traditional form There was probably a time when the Indo-European peoples (as yet un-separated) had no aspirates at all and while some dialects never arrived at more than one set of aspirates, others ignored them altogether or lost them again in course of time But it seems likely that before the separation of the Indo-European peoples, some of them at any rate had elaborated a threefold modification of consonantal contact—tenuis, media, and aspirate—thus securing in many cases (e. g. the root *tar*, 'to cross,' *dar*, 'to tear,' *dhar*, 'to hold') distinct utterances for distinct expressions. The distinction thus gained was kept up in Sanskrit by tenuis, media, and aspirated media (t, d, dh); and in Greek by tenuis, media, and aspirated tenuis (τ, δ, θ). But in Latin, where the aspirates had not been realised at all, the distinct utterance of the third (or aspirated) variety of consonantal sound would naturally be lost. Thus (to take a case where only two roots, one containing an aspirated sound, had to be distinguished) in

Sanskrit we have **da-dā-mi**, 'I give,' and **da-dhā-mi**, 'I place;' Greek keeps up the distinction in δί-δω-μι and τί-θη-μι, Latin is obliged to give it up, and retains only one of the two roots in *da-re*, 'to give,' replacing the other by different words, such as *facere* or *ponere* But *credere*, *condere*, *abdere* point back to the root *dhā*, 'to place,' as having existed originally in Latin as in other cognate languages The Teutonic tribes again, who had no aspirates, tried nevertheless to maintain the distinction between the threefold varieties of consonantal contact, which had come to them as 'the phonetic inheritance of their Aryan (Indo-European) forefathers' and it is in their endeavours to supply the place of the aspirates in words common to them with the other Indo-European nations that Professor Max Muller sees the first step in the progress of 'Lautverschiebung' Where Sanskrit had aspirated *mediae*, and Greek aspirated *tenues*, Gothic (like Celtic and Sclavonic) preferred the corresponding *mediae*, High German the corresponding *tenues* None of these, however, borrowed from, or came after, another, they are 'national varieties of the same type or idea.'

3 Thus far 'Lautverschiebung' is the representation of aspirate sounds by nations which did not possess them but the stock of common Indo-European words which began with *mediae* (*g*, *b*, *d*) and *tenues* (*k*, *t*, *p*) led to further changes in Gothic and High German utterance. These nations having, as we have seen, already used their *mediae* and *tenues* respectively to supply the place of the aspirates, found themselves in a difficulty The Goths, for instance, felt the distinction between the two series of consonantal sounds which Sanskrit kept distinct as *gh*, *dh*, *bh* and *g*, *d*, *b*, but they had already employed the second to denote the first, and so, in order to keep them distinct, fixed this latter series *g*, *d*, *b* in their own national utterance as *k*, *t*, *p*. Then arose the same difficulty of maintaining distinct the third series of sounds which Sanskrit and Greek had fixed as *k*, *t*, *p*, and the only remaining expedient was to adopt the corresponding 'hard breaths' *h*, *th*, and *f*.

Similarly the High German tribes, having taken the sounds which Greek took as *aspirate tenues*, χ, θ, φ, to be *k*, *t*, *p*, were driven to adopt the breaths *ch*, *z*, *f* as the second variety; while for the third variety nothing was left but the *mediae*, which however in the guttural and labial series have constantly been replaced by Gothic *h* and *f*.

If we denote the aspirates by (i), the mediae by (ii), the tenues by (iii), and the breaths by (iv), the following table will exhibit the process just described:—

	Original Aspirate	Media.	Tenuis
A Sanskrit	(i) gh, dh, bh	(ii) g, d, b	(iii) k, t, p
B Gothic	(ii) g, d, b	(iii) k, t, p	(iv) h, th, f
A Greek	(i) χ, θ, φ	(ii) γ, δ, β	(iii) κ, τ, π
C High German	(iii) k, t, p	(iv) ch, z, f	(ii) (g), d, (b) h f

The chief objection to this theory of the changes of Grimm's Law is, as Mr Peile points out (in note 1 to his 5th chapter), the want of sufficient motive for the *second* variation. The first obviously arose from the desire to get rid of the objectionable aspirates, which were expressed by the *mediae* in Gothic, the other changes following from a desire for clearness. But it is not so easy to see why, when the aspirates were gone, and only the breaths *h*, *th*, *f* left, the High German speech should have made any further change. Nor is it easy upon any theory to account for the first variation in the Gothic and Low German dialects, from the *mediae* or sonants *g*, *d*, *b* to the *tenues* or surds *k*, *t*, *p*, for all analogy of languages shows that phonetic change is from harder to easier sounds (i. e. from *tenues* to *mediae*) and not *vice versa*, so that *kin*, for example, would be at once assumed to be an earlier not a later form than *genus*, γένος. The facts are indisputable; but they seem to contradict one of the most invariable and best authenticated laws of speech. Nor has any theory yet been devised which is satisfactory at all points. We can only say generally of the changes for which we cannot account that they are possibly examples on a large scale of that tendency to maintain the distinctive features of a word against the influence of phonetic decay, an example of which is seen in the 'compensatory lengthening' of a syllable to make up for some loss of sound; and which may often be discerned in a struggle of the intellectual or instinctive desire to preserve those parts of a word that are characteristic of its meaning against the physical tendency to reduce the effort of articulation.

The regular action of Grimm's Law is sometimes interfered with by other agencies, e.g by the accent. To this are due such forms as *Mutter*, *Vater*, beside *Bruder*, for in Sanskrit we have **mātár**, **pitár** (cp. Greek πατήρ) accented on the last syllable, but **bhrấtar** (φράτωρ) accented on the first Such different forms, again, as *sieben* and *funf* (seven and five) are accounted for by finding **saptán**, ἑπτά, but **pánchan**, πέντε Again, the various phonetic tendencies in different languages—e g assimilation, the loss of *s* between vowels in Greek, or its change into *r* in Latin—may interfere with the operation of Grimm's Law, or, to speak more correctly, it may account for the non-occurrence under certain conditions of those observed phonetic facts of which that 'Law' is the statement and generalisation

General Table of Grimm's Law

Original Sounds		A			B Gothic and Low German	C High German
		Sanskrit	Greek	Latin		
I. Aspirates	KH	gh (h)	χ	h, f (g, v)	g	k
	TH	dh (h)	θ	f (d, b)	d	t
	PH	bh (h)	φ	f (b)	b	p
II Mediae	G	g (j)	γ	g	k	ch
	D	d	δ	d	t	zz
	B	b	β	b	(p)[1] ?	f, ph
III. Tenues	K	k	κ	c, qu	h, g (f)	h, g, k
	T	t	τ	t	th, d	d
	P	p	π	p	f, v	f, v

---

[1] There are few really Saxon, and no Gothic (unless foreign), words beginning with *p*. In Sanskrit, too, the consonant **b**, which ought to correspond to Gothic *p*, is seldom, if ever, an initial sound, its place being occupied by *v*. Hence this particular phase of Grimm's Law is inserted without illustration by both Bopp and Max Müller, to complete the scheme

Examples to illustrate Grimm's Law (chiefly from Bopp)

Original Sounds.	A			B		C.	
	Sanskrit	Greek	Latin.	Gothic and Low German	English	Old High German	German.
I Aspirates —							
KH	hansas	*χήν*	(h)anser	*g*ans	*g*oose	*k*ans	
	hyas	*χθές*	heri				
		χολή	fel		*g*all		
TH		*θήρ*	fera	*d*ius	*d*eer	*t*ior	*th*ier
	madhu	*μέθυ*			mea*d*		
PH	bhar	*φέρω*	*f*ero	*b*aira	*b*ear	*p*iru	
	bhrâtâ(r)	*φρατρία*	*f*rater	*b*rothar	*b*rother	pruoder	
II Mediae —							
G	janas	*γένος*	genus	kuni	kind	chunni	
	jânu	*γόνυ*	genu	*k*niu	*k*nee	chniu	
D	dvau[1]	*δύο*	duo	*t*vai	two	zuei	zwei
	damas	*δόμος*	domus	*t*imr	*t*imber		zimmer
B							
III Tenues —							
K	hṛidaya[2]	*καρδία*	cor(d)	hairtô	heart	herża	
	kas	*κός*	quis	*h*vas	*who*		
		κέρας	cornu	heorot	hart	hiruz	
T	tvam	*τύ*	tu		thou		du
	trayas[3]	*τρεῖς*	tres	thrais	three	drî	drei
	tanus		tenuis		thin		dunn
P	padas	*πούς*	pes	fôtus	foot (f=b)	fuoz	fuss (f=asp)
	pûrna	*πλέος*	plenus	fulls	full (f=b)	vol	voll

[1] Nom dual.

[2] An irregular form, we should expect krid-

[3] Nom plural.

CHAPTER V.

FORMATION OF WORDS.

LANGUAGE is made up of articulate sounds combined into words. These sounds, however, convey no meaning in themselves (except in a few cases of interjectional sounds) and it is only when *words* are formed that we have language properly so called, the medium of communication between men, the means of expression of human thought. Thus, although to understand the changes and varieties in the outer form of language, it is necessary to investigate the nature of sounds and their production by the physical organs of voice—the 'Phonology' or 'Sound-Lore' of linguistic study, the ultimate facts in language regarded as an expression of thought or meaning are *words*—or rather, the elements, or several combinations of sounds expressive of meaning, into which a careful analysis shows that all words can be divided—i e 'Morphology' or 'Word-Lore[1]' These elements are broadly divided into 'radical' and 'formative'—i e. on the one hand, that portion of the word which gives its general meaning in the simplest and most rudimentary form, on the other, all those additions which vary or define or restrict this general idea, or adapt the word for its place among, and its relation to, other words combined into a sentence for the expression of thought. The *radical* element of a word is termed the *root*. while under the term *formative* elements are included (1) those modifications of the root either by 'dynamic change' or by the addition of suffixes (themselves originally independent roots), by which it becomes a Noun- or Verb-'Stem;' (2) the inflections expressive of Case, Number, or Gender, Tense, Mood, or Person, by which these Noun- or Verb-Stems are enabled to express so many various shades of meaning when placed in relation to each other as parts of a sentence

---

[1] Some references to books which treat more fully of these questions than is possible here, may be of service to the student Thus, on Phonology Schleicher, 'Compendium,' §§ 1–204, Ferrar, 'Comparative Grammar,' ch. i–vi §§ 1–86, Peile, 'Introduction to Greek and Latin Etymology,' Roby, 'Latin Grammar,' Book I §§ 1–302; Curtius, (The Student's) 'Greek Grammar,' §§ 1–99, and 'Elucidations,' pp 17–47 On Morphology Schleicher, §§ 205–241, Ferrar, ch vii. viii §§ 87–127, Roby, Book III. §§ 740–999 In Curtius' 'Greek Grammar' and 'Elucidations' the formation of Noun and Verb stems is treated as a part of Noun and Verb Inflection.

[It should be noted here, that this division into Noun and Verb ('Nominal' and 'Verbal' Stems or Bases) is exhaustive of Indo-European words In all Indo-European languages (and therefore in Greek and Latin) there are originally only two kinds of words distinguished as *noun* (ὄνομα) and *verb* (ῥῆμα) The faculty of language in man leads him first to give *names* (*nomina*, ὀνόματα) as signs expressive of conceptions, and then leads him to form *verbs* (*verba*, ῥήματα) to express that which 'is said' about or predicated of the conception expressed by names All other 'Parts of Speech' designated by grammatical analysis have been developed out of one or other of the two main classes of Nouns and Verbs This is sufficiently obvious with *Adverbs*, which are often merely case-forms of existing nouns, substantive or adjective (e.g δίκην, *instar*, *torva tuens*, πλεῖον, πλεῖστα), and can generally be traced back to archaic, or mutilated, or otherwise altered case-forms The same applies to Prepositions, which grammatical analysis shows to have been originally adverbs[1], separable alike from the cases with which they are used, and from the words with which they are compounded in classical Greek or Latin, many prepositions being still used in those languages as adverbs (e.g *ante*, *circum*, *contra*, *extra*, etc) So too with Conjunctions and all 'Particles,' though it is not always possible to trace the original form in words which, being in very constant use and not as the most essential words in a sentence, are the more liable to corruption and decay in utterance In words however such as *ὅτι*, *quod*, *quia*, *quam* it is obvious, *que* is some case form of *qui;* *ὡς* is evidently adverbial, and *ut* is merely its phonetic equivalent, *non=ne ŭnum*, and *ne*, *nei* is evidently a case form, and similarly, numbers of examples might be produced, were we concerned now with more elaborate proof of the statement here given [1]]

---

[1] See Curtius' (The Student's) 'Greek Grammar,' §§ 444–446, 'Elucidations,' ch xvii pp. 200–202.

By a '*root*' we mean the simplest combination of sounds which expresses the general meaning of any word or set of kindred words, e g. *da* is the root of Sanskrit **da-dā-mi** (*δίδωμι*), *da-mus*, *da-tur*, etc, Sanskrit **dā-tar** (*δοτήρ*), etc. *jug* of *ju(n)go* *jug-um* (for the nasal sound *n* in present stem cp *λαμβάνω*, *ἔ-λαβ-ον*)

The formative elements, suffixes and inflexions, which form words from simple roots, are originally independent roots Thus in *δίδωμι*, **da-dā-mi**, *mi* is a weakened form of *ma* the pronominal element of first person, in *vox* (*voc-s*), Sanskrit **vāk** (=**vâk-s**), *s*=*sa* demonstrative pronoun.

Thus every I. E word is a whole gradually sprung from several, *or at least two*, 'roots' The first of these is *the* 'root' in the ordinary acceptation of the term, i. e *that which conveys the meaning* in general, the others have degenerated into suffixes for expressing modifications of meaning

In the '*Isolating*' or '*Radical*' stage of language, the roots remain separate and distinct: *i-ma*.

In *Agglutinative* languages the principal root remains the same, but receives an addition in the form of a changeable prefix, suffix, or infix *i-ma* or *i-mi*.

The *Inflectional*, or highest type of language, alters the principal root (by reduplication or by raising the vowel) for purposes of expression: *aimi* (Sanskrit **emi**), *εἶμι* [2]

N.B —A simple root without modification or addition of suffix cannot form a *word*.

---

[1] See Appendix II.

[2] On the three 'stages' of linguistic growth, see ch. ii. pp. 4–8.

Indo-European roots are generally *monosyllabic*[1], and are distinguished as.—

1 *Primary;* e g *i* (go), *ad* (eat), *da* (give), *yu* (join).

2 *Secondary,* e g *tud* (strike), *yug* (*jug*, yoke, i e. join), *yudh* (fight, i e join battle), *plu* (flow), *ard* (hurt), *spac* (see).

These secondary roots are probably in all cases (as evidently *yug*, *yudh*, cp with *yu*) modifications of primary roots, by the addition of a letter or letters, expressing usually some extension or limitation of the idea[2]. The additional element may have been in some cases 'dynamic' (see above, p 51), in others 'phonetic'—i e. a mere change of sound, afterwards turned to account for the expression of meaning, as e g the phonetic variation of the *a*-sound into *a*, *e*, *o* (p. 36)

The primary roots are the most important in the history of language, but their predicative power being generally too indefinite to answer the purpose of advancing thought, they were to a large extent encroached upon and supplanted by secondary roots

Philologists are not agreed upon the exact definition of a '*root*' Professor Max Muller (Lectures I p 215) states a root to be 'whatever cannot be reduced to a simpler or more original form' This, he says afterwards (Lectures, II. chap iii.) is objected to as making a root a mere abstraction, and so unfit to explain the realities of language, to which he replies that in one sense a root *is* an abstraction; for it is a cause, which we only recognise and arrive at from its effects, viz words. These effects we hear in language, but not the root itself. At the same time Professor Max Muller seems to maintain the real force of roots—e g that the root *da*, in some way or other which we cannot yet explain, has some necessary connection with the idea of '*giving*'—and regards them as 'phonetic types' which we cannot as yet explain, but which alone give us definite forms on which to rest our enquiries into language, standing between us and the 'chaos of onomatopeia and interjections' It seems however that, as we cannot know with certainty the ultimate form of these roots, our speculations as to the connection between them and the ideas they express can be little more than guess-work[1].

---

[1] Some philologists think that the majority of roots in most languages were of more than one syllable in the earliest stage, and in Indo-European secondary roots such as *yudh*, *mard*, *smar*, &c would see dissyllabic forms worn down by phonetic decay, *yu-dh*, for example, representing *yu-dha*

[2] E. g from root *tar* (whence τείρω, *tero*, etc) we get the modified forms (*tra*), *tri* (triticum), *tru* (τρύω, etc), *tork* (*torqueo*, ἀ-τρεκ-ής = 'not turned'), *tram* (τρέμω), *trib* (τρίβω, *tribula*), *trup* (τρύπανον). *Tra* is a variety of *tar*. *tri* and *tru* are secondary, by modification of *a* to *i*, *u*.

Those therefore who disbelieve in the existence of, or at least in any chance of finding out, any necessary connection between roots and the ideas expressed by them, prefer to consider roots as 'mere abstractions,' as 'headings' of common elements under which to class words belonging to the same family, as 'labels' or 'tickets' of classification After all, they say, we can only find out in many cases the simplest forms in individual languages, and if in different languages we find different simplest forms or roots to express the same idea, it is hard to assume in the case of any one of them any inherent or natural power by which it is connected especially with that idea. An example of this view may be seen in Peile's 'Introduction to Greek and Latin Etymology,' where the definition given by Curtius of a root as 'that combination of sounds which remains when a word is stripped of everything formative' is accepted[2]

I am inclined to think this latter view is the safest, and the most consistent not only with the present state of the science of language, but with its future prospects As was said above (chap 1 pp 2, 3) we arrive by analysis of language at certain primitive and elementary combinations of sounds, which we call '*roots*,' and which, forming as they do the common element in groups of connected or kindred words, we speak of as conveying such and such a meaning But we must now, and I think always, accept these simplest forms as *ultimate facts* which Philology will never explain to us Comparison of languages and analysis of words may now and then point to some simpler and more elementary form than has yet been reached: but the prospect of finding out the reason of such forms, and *why* they came to have the meanings which they have in language, is so remote, if not altogether visionary, that it may for all practical purposes be disregarded. And therefore I prefer such a description or definition of roots as assumes nothing with regard to their inherent power of expressing particular meanings, and whether under the title of 'abstractions,' 'labels,' or 'simplest forms' takes them as facts, but *unexplainable facts* They are, as Professor Sayce puts it (Introd ii p 7), 'the phonetic and significant types discovered by the analysis of the comparative philologist as common to a group of allied words They form, as it were, the ultimate elements of a language, the earliest starting-point to which we can reach' And as each family of languages has its own stock of roots, these roots exhibit the characteristics of the family to which they belong, sometimes they are monosyllabic, sometimes polysyllabic, sometimes they must contain a vowel (in Turanian), sometimes no vowel (Semitic and perhaps Chinese).

---

[1] Mr Peile puts this forcibly and clearly ('Introduction,' p 42) 'That there was some connection (between idea and form) originally I believe, but I do not believe that it is ever discoverable with certainty and that it was ever necessary, I deny' And in support of this position he aptly quotes M Renan's dictum ('De l'Origine du Langage,' p 48), 'La liaison du sens et du mot n'est jamais nécessaire, jamais arbitraire, toujours elle est motivée'

[2] Ch. iii. pp. 41-44 (3rd ed)

On this view, then, a root may be defined as 'the simplest ascertained combination of sounds, which expresses the general meaning of any word or set of kindred words in one or more Indo-European languages[1]'

Roots are for the most part '*predicative*,' i e. expressive of ideas of action, state, etc, but there is a limited number of '*pronominal*' or '*demonstrative*' roots (expressive e.g. of such ideas as 'here,' 'there,' 'this,' 'he,' 'I,' etc.), which cannot be traced back to predicative roots and must be considered independent of those ordinarily so called These pronominal roots enter considerably into the formation of inflections[1], as well as of the pronouns and pronominal particles (i e. conjunctions and some adverbs and prepositions)

---

[1] The distinction between roots, stems, and words may be shortly put thus —The *root* is the original part of the word, giving a certain idea; the *stem* is that idea more closely defined to a certain bearing of it, the *inflected form* (or *word*) is the complete word as used in speech in connection with other words in a sentence. Compare 'Elucidations to Curtius' Greek Grammar,' Translator's Preface, p. vii.

Stems (also called 'bases' or 'themes') arise from roots by modification of the root-vowel, or addition of formative suffixes Roots express a possibility (potentiality) of action The stems formed from them denote for verbs the action itself, for nouns the person, state, or thing concerned in or resulting from that action Thus the root *da*=giving (potential), **da-dā-mi**, *δί-δω-μι*, *do* = 'I give,' *δο-τήρ*, *da-tor* = the person giving, the giver, *δό-σις*=state of giving, *do-num*=thing given The *stem* of a word is most readily detected by observing what remains when the 'inflection' (i e declension or conjugation ending) is withdrawn.

Inflections are the alterations in or additions to a word, to fit it for different functions as parts of a sentence the common part which remains the same under these different uses being the *stem* Thus in *λόγος*, *dominus* —

N	*λόγο s*
A	*λόγο-ν*
V	*λόγο* (stem used interjectionally, and *o* sinks to *ε*)
G	*λόγο-syo*, *λόγο-ιο*, *λόγο-ο* (*λόγου*)
D	*λόγο-οι*, *λόγῳ*

The common part *λογο-* is the *stem* the *root* is *λεγ-*, seen in *λέγ-ω*

---

[1] A list of Indo-European pronominal roots is given in Leo Meyer's 'Vergleichende Grammatik,' I pp 324-335, cp Ferrar, 'Comp Gram' § 95 The following are among the more important of these roots and their derivatives *a*, whence probably the augment (in Sanskrit **a**), and possibly *ἐγώ*, *a-σμε-s* (*ἡμεῖς*), etc , *i*, in *i-d*, *i pse*, *i-ta*, etc , *kva* (who), Skt **ka-s**, Gk *τίς*, Lat *quis*, *πῶς*, Ion *κῶς*, *καί* (a locative), *κεν*, *ta* (demonstrative), whence Gk *τόν*, *τήν*, *τό*, *οὗτος*, etc , Lat *is te*, *ipse*, (for *ip-te*), *tum*, *tam*, *item*, etc , *da-*, whence *πο-δα-πός*, *ὅ δε*, *quando*, *qui dam*, *unde*, etc , *sa* (demonstrative), Gk *ὁ*, *ἡ*, *na*, *an*, *ana*, whence Gk *νώ*, *νίν*, *νή*, *νῦν*, *ἄν*, *ἐν*, *ἀνά*, Lat *nos*, *ne*, *num*, *in*, etc *pa*, in *ἀ-πό*, *παρά*, *περί*, *ab*, *pro*, *per*, etc , *bha*, in Skt inflections, **-bhyas**, **-bhyām**, and **-bhis**, Gk *-φι*, and Lat *-bis*, *-bus* of dat abl. plur , *ma*, *tva*, and *sva* of 1st and 2nd pers and reflexive pronoun

N	domino-s,	dominus
A	domino-m,	dominum
V	domino-,	dominŏ (as above).
G	domino i,	domini
D	domino-i,	dominō (or illo-i, illi)
Abl	domino-o,	dominō

The common part *domino-* is the *stem* the root is *dom-*, seen in *dom-a-re*, *δέμ-ειν*, etc *-ino-* is a *suffix* added to the root to form a nominal base or stem

[Note that the *stem* is distinct from the *inflected* word, and must not be confounded even with the Nominative Case, e.g *σωφρον* (seen in oblique cases *σωφρον-ος*, *κ τ λ*) is the stem of *σώφρων*, *πραγματ-* of *πρᾶγμα*, and Latin words like *consul*, *mulier* have dropped the final *-s* indicating the Nominative Case]

So *vox*=*vōc-s* The root is *vŏc-* (seen in *vŏc-o*) the stem *vōc-* by modification of the root-vowel

φά-τι-ς (speech, report), root *φα-*, nominal suffix *-τι-*, inflection *-ς* The same root *φα* is lengthened to form a verbal stem *φη-μί* the nominal stem is *φατι-*

So in the formation of *Verbs* —

εἶμι (*ibo*) root *ĭ* (in *ἵ-μεν*), stem *εἰ*, by modification of root inflection *-μι*

εἰμί (*sum*)=*ἐσμί*, Sanskrit asmi Root and stem (in this case identical) *ἐσ*. Inflection *-μι*

ὄρ-νυ-μι, root *ὀρ-*, verbal suffix *-νυ-* to form the present stem

φεύγ-ω=*φεύγ-ο-μι* Root *φυγ-* (in *ἔ-φυγ-ον*, 2 aor) modified to form the present stem, inflection *-μι*, 'thematic vowel,' increasing the stem before inflection, *-ω-* (appearing also as *ο* in *φεύγ-ο-μεν*, *ε* in *φεύγ-ε-τε*, and *o*, *i*, *u* in Latin, e g *fer-o*=*φέρ-ω*, *fer-i-mus*, *fer-u-nt*)[1]

[Note that in the Conjugation of verbs we must distinguish different Verbal-stems called generally 'Tense-Stems,' each the common element of a number of forms of the same verb. Thus in the scheme of *τύπτω* we have the 'pure verbal stem' *-τυπ-* (seen in 2 aor *ἐ-τύπ-ην*); the 'present stem' *τύπτ-* common to all forms of present and imperfect tense; the 'perfect stem' *τέτυφ-*; the 'weak aorist stem' *-τυψα-*, and the 'strong aorist stem' *-τυπ-* identical with the 'pure verbal stem' The fuller consideration of these will fall under the head of Verb-Inflection (chap. viii), and they are enumerated now by way only of illustration]

---

[1] In the first edition of this work the earlier view of Curtius that this *ω* (o, e, *i*, *u*) is a 'connecting vowel' was adopted, but has now been abandoned for reasons given below (ch. viii)

There are four main processes of word-formation from roots, viz —

(1) *Reduplication*—in imitative names and perfect stems, etc

(2) *Internal Change* by 'raising' or 'intensifying' the root-vowel

(3) *Addition of Suffixes*

(4) *Composition*, i e the formation of two or more words into one.

Of these processes (1) and (2) have been considered and illustrated under the head of 'Dynamic Change' (chap iv pp 51–55) (4) is generally treated of in the grammar of each language We are now, therefore, concerned mainly with (3) Addition of Suffixes

This term 'suffix' is applied by writers on philology to different elements in word-formation, which must be carefully distinguished Thus we speak of

1 '*Suffixes*' *of Inflection*, i e the 'Inflections' properly so called, the case-endings of nouns and person-endings of verbs These will be considered at length in chaps vi–viii

2 '*Formative Suffixes*,' by the addition of which to 'roots' are formed 'bases' or 'stems.' And as bases or stems are either verbal or nominal (above, p. 93), so the formative suffixes may be divided into 'verbal' and 'nominal suffixes'

a. The *verbal* suffixes are chiefly *-ya* and *aya* from which are formed the verb-stems of all the contracted (and many other) verbs in Greek, and of the first, second, and fourth 'conjugations' in Latin [see below in the Appendix to this chapter].

b The *nominal* suffixes are more numerous a list of the more important is given on pp 102, 103 Not unfrequently a nominal stem is used to form a verb as well as a noun, e.g *φυλάσσω* is formed from *φυλακ-*, the nominal stem of *φύλαξ* (*φύλακ-ς*), *acu-o* from *acu-*, the nominal stem of *acu-s* (a needle) Such verbs are called *nominal* (sometimes *denominative*) verbs.

3 *Stem Suffixes*, a class of verbal suffixes perhaps originally formative like *ya* and *aya*, but unlike these, found only in the present and kindred tenses Such are *na*, *nu* (*μάρ-να-μαι*, *sper-no*, *δείκ-νυ-μι*, etc), *ska* (verbs in *-σκω*, *-sco*), *ta* (*βλάπ-τ-ω*, *τίκ-τ-ω*, *necto*, etc), and according to Schleicher the 'thematic' vowel *a* (bhar ā-mi, *φέρ-ω*(*μι*), etc) Most common however as a stem-suffix is *ya*, appearing as *ι* in *ἰδ-ί-ω*, *δα-ί-ω*, etc, as *ε* in *δοκέω*, *γαμέω*, and certain other verbs in *εω* which are distinguished from the regular formation with *aya* by having this suffix confined to the present stem, and passing by assimilation (p 104) into λλ (*βάλλω*=*βαλyω*), *σσ* or *ττ* (*φυλάσσω*=*φυλακ-yω*, etc, see p 75), or *ζ* (*ἐλπίζω*=*ἐλπιδ-yω*), and in the verbs in *io* of the third conjugation in Latin (*cap-i-o*, *fug-i-o*, etc), and (possibly) after assimilation in *pello*, *curro*, etc

Of the origin of all these suffixes nothing more is known than that the verbal suffixes were probably for the most part ordinary or 'predicative' roots, the nominal suffixes for the most part 'pronominal' or 'demonstrative' roots.

APPENDIX TO CHAPTER V

A. List of Nominal Suffixes[1]

Nominal Suffixes are either *Primary* or *Secondary* Primary Suffixes are those by which Nouns are formed from Roots or Verbal stems Secondary Suffixes (also called *Denominative*) are those by which Nouns are formed from Nominal stems

1 *ya* (Greek -ιο, Latin -*io*) ἅγ-ιο-ς, μοῖρα = μόρ*ya*, ὄσσα = ὄκ*ya*, *eximius*, *coniugium* (root *iug* of *iugum*), *ingenium* As sign of feminine, φέρουσα = φέροντ-*ya*, μέλαινα = μελαν*ya*

2 -*va* (*vo*), *van* = Ϝο, Ϝον αἰών = αἰϜων, *aevum* *arvum* (root *ar* of *arare*), *vacuus* (*vac* in *vac-are*)

Ϝεντ (secondary) χαρίεις, χαρίϜεντ-ος, χαρίεσσα = χαρίϜετ *ya*

Ϝοτ εἰδώς = εἰδ-Ϝότ-ς

3 -*ma*, -*mo*, -*mon*, -*mat*, -*meno* τιμή, θυμός, τλήμων, εἷμα = Ϝέσματ, ὄμμα = ὀπματ, *forma*, *animus*, *sermo*(*n*), partic mid διδόμενος, *alumnus*, infin ἔδ-μεναι (Homer)

4 -*an*, -*ana*, -*na* τέρην (-ενς), *pecten*, ὄργανο-ν, ἱκανό-ς, ἡδονή Infin -ναι, -εναι, λελοιπέναι, στῆναι, φέρειν = φέρενι = φέρεναι, *donum*, *somnus* (*sop-nus*) part in -*dus*, -*on-do*, -*en-do*, -*un-do* Secondary -ινο-, as λίθ-ινο-ς

5 -*ta*, -*to*, -*tat*, in adject, subst, part pass, and verbal adject πολίτης, κοῖτος, *secta*, κλυ-τός, γνω-τός, *ama-tus*, νεότης (νεοτητς), *civitas* (*civitat-s*)

6. -*tar*, -*ter*, -*tor*, -*tra*, etc, in words expressive of relationship and *nomina agentis* · πατήρ, φράτωρ, σωτήρ, ἵστωρ, ἰατρός, ῥήτρα *pater*, *victor* (or with additional suffix for fem *vict*(*o*)*r-ic-s victrix*) Part fut stem -*turo* and feminine *nomina actionis*, *sepultura*, *usura* (*ut-tura*)

7 -*ti*, -*si*, etc in *nomina actionis* μῆ-τι-ς (root μα), φά-τι-ς φύσις, *messis* (= *met-ti-s*), *vectis*, *potis*, *compos* (*compot-s*), *dos*

---

[1] Fuller particulars may be found in Schleicher, 'Compendium,' §§ 215–231 (pp. 361–462 German third edition)

(*dot-s*), *mens* (*ment-s*). Further formations; *-σια* femin. *θυ-σία*, *δοκιμασία* Latin *-tio*, *-tia*, *initio*, *servitio*, *justitia*

8 *-tu*, *βρωτύ-s*, *ἄστυ*, *-σ̇υνη* (*-τυνη*), secondary suffix in *μνημο-σύνη*, *δικαιο-σύνη* In Latin much commoner, e.g verbal nouns in *-tus*, whence supines in *-um* and *-u*, *dictu*, *ama-tum*, *casum*=*cad-tum*, etc, cp *appara-tus*, *soni-tu-s*, etc of purely substantival use *-tuo* (*-tva*), a further formation in *mortuus*, *statua*, etc *-tu-ti*, *-tudon* or *-tu-din* in *servi-tut-is*, *altitudinis*

9 *-ant*, *-ent*, *-ont* in partic act of pres fut and aor *ων*=*ἐσ-όντ-*, *ἐοῦσα*=*ἔσ-οντ-ya*, *ἱστας*=*ἵσταντ-s*, *θείς*=*θέντ-s* So Latin *-ens*=*ent-s* e g in *prae-sens*, *sens*=*es-ent-s* (*ἔσ-οντ-s*), and the further formation in *praesentia* corresponds to Greek fem *-ουσα*=*οντ-ya*

10 *-es*, *-os*, *-us* in neuters, *γένος*, *genus* (genitive *γένε(σ)-os*, *gener is*), *ψευδής* (stem *-εs* in neuter *ψευδέs* and genitive *ψευδέ(σ)os*, *ψευδοῦs*) Masculines in *-or*=*os*, *sopor*, *honor*, *labor*, (*honos*), *labos*)

11 *-ka*, *-co*, Greek *θή-κη*, and (secondary) the adjectival suffix *κο-*, *φυσι-κός*, *κ τ λ* Latin *pau-cus*, *lo-cus*, *civi-cus*, *belli-cus*, etc

12 *-ra*, *-la*, Greek *ἐρυθ-ρό-s*, *λαμπ-ρό-s*, *ἄκ-ρο-s*, *κ τ λ*, *δει-λό-s* (root *δι* in *δέ-δι-μεν*, *δέ-δοι-κα*), *σιγη-λό-s*, *φυ-λή*, *ὀμίχ-λη* *-ερο-* is a secondary variety of this suffix, *φοβερός*, *δροσερός* but the *ε* is perhaps only the *ο* of stem *φοβο-*, *δροσο-* The element *-ρο* or *-λο* seems to enter into other suffixes, *-υρο*, *-ωρη*, *-ωλο*, *-ωλη*, *-ιλο* Latin *rub-ro-*, *gna-ro-*, *ple-ro-*, etc *Sella* = *sed-la* (= *ἕδ-ρα*), *cande-la*, *loque-la*, *ala*, *velum*, etc The element *-la* also appears in other suffixes, *-ulo-*, *-ula-*, *-ili-*, etc

B. DERIVATIVE VERBS IN GREEK AND LATIN, FORMED BY ADDITION OF THE SUFFIX *-aya*, or *ya*

$$\text{1. }\left.\begin{array}{ll} \text{-}\hat{\alpha}\nu & \text{-}\hat{\omega}=\text{-}\acute{o}\omega=\text{-}\acute{\alpha}\omega \\ \text{-}\breve{a}re\cdot & \text{-}\bar{o}=\text{-}ao \end{array}\right\} =\acute{\alpha}y\omega=ay\hat{a}\text{-}mi,$$

e g Sanskrit **damáyāmi**, Greek *δαμάω*, Latin *domo* (*domao*), Gothic *tamja*, German *zahme.*

Many derivatives in *-âν*, *-āre* are connected with fem. substantive stems in *-ā*, e.g. *κομάω*, *κομῶ*, Lat. *como*, with *κόμη*, *comā*, *κομά-yω*, *comā-yo* Others with *-ō* stems (originally *-a*); e g *ἀντιᾶν* (*ἀντίο-ς*), *armāre* (*armo-*) *firmare* (*firmo-*)

2 *-εῖν* · *-ῶ* = *-έω* } = *έyω* = *ayâmi*;
-ēre. *-eo* }

e g *ἀρκέω*, Lat. *arceo* (*arkáyāmi*)

3 *-οῦν*, *-όω* = *όyω* = *ayāmi*.

4 *-ίειν*, *-ίω* (or *ίζω*) } = *ί-yω* = *ayāmi*
-īre, *-io* }

5 *-ύειν*, *-ύω* } = *ύyω* = *uyōmi*
-uere, *-uo* }

So in Sanskrit **gátu-yā́mi** (*gātú*), Greek *γηρύω* (=*garuyomi*), stem *γηρυ-*

6 *-άζειν*
-έζειν
-όζειν
-ίζειν

In these the *ζ* arises from the effect of the *j* (*y*) sound upon a preceding consonant, guttural or dental, e.g *ἁρπάζειν* = *ἁρπάγ-yειν* (*ἁρπαγ-ή*), *θαυμάζειν* = *θαυμάδ-yειν* (*θαυμα-*), *πιέζειν* = *πιέσ-yειν* (*πεπίεσ-μαι*, *ἐπιέσ-θην*), *οἰμώζειν* = *οἰμώγ-yειν* (*οἰμωγ-ή*), *ἐλπίζειν* = *ἐλπίδ-yειν*, *χαρίζεσθαι* (*χάριτ-ος*), *ὀλολύζειν* (*ὀλολυγ-ή*)

7 *-σσειν* · *σσ* = *κy*, *γy*, *χy*, *τy*, *θy* e g *θωρήσσειν* (stem *θωρηκ-*), *ἀλλάσσειν* (*ἀλλαγ-ή*), *ὀρύσσειν* (*ὀρυχ-ή*), *κορύσσειν* (*κορυθ-*), *ἐρέσσειν* (*ἐρέτ-ης*, *ἐρετ-μός*) See pp 74–76

8. *-αίρειν* = *άρ-yειν*
-είρειν = *έρ-yειν*
-ῡρειν = *ύρ-yειν*

The *y* sound being thrown back into the stem syllable and becoming the *vowel* sound of *ι* (cp *μέλαινα* = *μέλαν-yα*, p 102)

9 *-άλλειν*
-έλλειν
-όλλειν
-ύλλειν

Probably from *λy* but as no noun-stems end in *λ* (*ἅλ-ς* excepted), these are derivatives from stems in *-λο*, the stem-vowel *ο* being lost.

10. *-αίνειν*
-είνειν
-ΐνειν
-ύνειν

y sound thrown back as vowel into the stem syllable, as *-αίρειν*, etc, above

[A large number of examples under each of the above heads may be found in Leo Meyer's 'Vergleichende Grammatik,' vol ii pp. 1–78.]

CHAPTER VI.

NOUN INFLECTION

To the stem of an Indo-European noun are added (1) the inflections of case, (2) in the plural, the sign of number The dual is perhaps an earlier expression for multiplicity[1] (more than one), a survival from a primitive epoch, which in Latin and in most modern languages has fallen out of use altogether, and where retained, as in Greek and Sanskrit, has a tendency to disappear as a useless exuberance of expression In Hellenistic and Modern Greek it does not exist

The cases were originally eight viz Nominative, Accusative, Locative, Dative, Ablative, Genitive, Instrumental, and outside of these, the Vocative, which is no *case* properly so called, but the uninflected noun-stem used as an interjection[2] Sanskrit alone, however, retains the full number of independent case forms, and that only in the singular number for in the plural the vocative disappears (the nominative being used, as in Greek or Latin), the dative and ablative unite, and the instrumental has only one form (as against two in singular), while the dual has only three distinct forms, one for nom and acc., one for instr. dat and abl, and one for gen and loc In the singular too gen and abl., loc. and dat, are nearly related in form.

---

[1] 'All over the world reduplication seems to have been the earliest contrivance for denoting something beyond the singular, and to this day in Bushman, as in many savage jargons, it serves for a plural' (Sayce, Introd. vol 1 p 411) The doubling of an object appears in such cases to be the furthest point of multiplicity to which the mind can reach I have observed in a child learning to speak, that for some time he applied the expression 'Two men,' to any number larger than one.

[2] See however below, p 117

In the kindred languages, the loss of distinct case-forms—or, to speak more correctly, the merging of two or more originally distinct case-forms into one—must have begun early in their linguistic growth The oldest accessible remains of the Greek language show us the ablative merged in the genitive, though Latin, on the other hand, has retained the distinction of form The dative and locative, again, have become one in Greek, and to a certain extent in Latin while the instrumental has vanished from both In both languages, however, we shall find remnants of both locative and instrumental *forms*, and Greek has at least one conspicuous remnant of its lost ablative case in the common adverbial termination -ως The confusion in practice of the clear grammatical distinctions between different cases naturally led to intermixture and confusion of forms, so that no formula will represent all the correspondences between the case terminations of the three languages in question, but a general idea may be given thus —

Sanskrit	*Greek*	*Latin*
Nom	Nom	Nom
Acc	Acc	Acc
Dat	Dat	Dat
Instr	„	Abl
Loc	„	
Abl	Gen	
Gen		Gen
Voc	Voc	Voc

Gender

The distinctions of *gender*, originating doubtless in the desire to give different names for creatures in which there is conspicuous difference of sex, has been in most Indo-European languages artificially extended far beyond the limits of natural sex. 'The world of untraceably sexual or of unsexual objects is not relegated to the indifferent "neuter," great classes of names are masculine or feminine partly by poetical analogy, by an imaginary estimate of their distinctive qualities as like those of one or the other sex in the higher animals, especially man; partly by grammatical analogy, by resemblance in formation to words of gender already established. At any rate, in the common Indo-European period all or nearly all attributive words were inflected in three somewhat varying modes, to indicate generic distinctions; and the names of things followed one or other of these modes, and were masculine, or feminine, or neuter[1].' Yet, widespread as is their employment of generic distinction, the Indo-European languages have no special phonetic element for its expression, but, as occasion arose, various secondary means were employed This seems to show that the universal distinction of gender which we find in Greek and Latin is neither original nor necessary, but a subsequent development of language

Modes of generic distinction —

1 In Consonant-Stems and stems in *-i-*, *-u-*, or a diphthong (πατήρ, μήτηρ, *facilis*, *manus*, ναῦς), the only distinction of gender is by external means, i e by the gender of some other word in grammatical agreement (ὁ πατήρ, ἡ μήτηρ, *saeva manus*, etc) With *ă* stems (including *a*- *o*- stems) the raising of the vowel to *ā* (Greek η, Latin originally -*ā* of fem sing) generally denotes feminine gender Occasionally however *ā* is masc (πολίτης, *advenā*, the original quantity), and *ă* (ŏ, ŭ) is fem. (ὁδός, *mālus*, *humus*, etc) so that this means of generic distinction is not of invariably certain application

2 Certain case-suffixes are appropriated to a particular gender, or a case is not employed in a particular gender, but its place is supplied by some other form Thus in nom sing. the neuter has no final -ς, either the accusative (*novum*, δεινόν) or the mere uninflected stem (ἀληθές, εὐρύ, *facile*, *facili*) being used.

3 Originally identical forms are distinguished, and the distinction adopted as a mark of gender e.g with the breaking up of the *a* sound into *a o*, *novo-d*, *nova-d*

4 Certain stem forms are appropriated to certain genders, especially feminines, in *-ya*, *-is*, *-ic*, etc , φέρουσα = φέροντ*ya*, δότειρα = δότερ*ya*, αὐλητρίς, *victrix* = *vict*(*o*)*r-ic-s*, etc

[The distinction of gender is retained in the Teutonic languages, e.g modern German, and the Romance derivatives from Latin. English has abandoned the artificial part of the system, retaining a difference in *form* only where sex is really an important distinction (e.g. *man*, *woman*; *bull*, *cow*; and the suffix *-ess* in *Princess*, *lioness*, etc.), but it retains its fundamental distinction in the pronouns *he*, *she*, *it*, or *who* and *what*. Other languages (e.g. modern Persian) have lost even that generic distinction and in most of the agglutinative and isolating languages grammatical gender is said never to have existed at all.[1] There is of course in the necessity of things no reason for choosing one particular accident of a conception rather than another as a subject for grammatical distinctions, but, as a matter of fact, there is always a strong natural personifying tendency at work in men's minds, leading them to invest even inanimate things with the idea of sex. Thus a ship to a sailor, a railway train to a porter, is always '*she*,' and uneducated people often use the pronoun '*he*' where ordinary usage prescribes '*it*.' These are examples of the *natural* tendency to extend distinctions of gender taking effect in a language which has generally repudiated such extension to all objects as unnecessary and it is to the unrestrained working of such natural tendencies that we may ascribe the great development of generic distinction at an early period in the Indo-European languages, before, in fact, they had as yet branched off from the primitive stock.]

---

[1] Ferrar's 'Comparative Grammar,' p 200

Declension

Nouns are divided into two main classes or 'declensions' according to the final letter of the stem viz. —

I. *Vowel-Declension* (or A declension), including stems which end in *-a*, *-e*, *-o* (the three varieties of *a* the original vowel), and thus comprising the 1st (*musa-*), 2nd (*domino-*), and 5th (*facie-*) 'declensions' of Latin Grammar; and the 1st (*πολιτα-μουσα-*) and 2nd (*ταυρο-*) of Greek Grammar.

II. *Consonant-Declension*, including stems which end in a consonant, or the semi-vowels *-i*, *-u*, or diphthongs *αυ*, *ευ*, *ου*: thus comprising the 3rd and 4th 'declensions' in Latin (*judic-is*,

---

[1] Sayce, 'Introd.' i. p. 404.

navi-s, gradu-s), and the corresponding nouns in Greek (*φύλακ-ος, πόλι-ς, βότρυ-ς, βασιλεύ-ς, ναῦ-ς, βοῦ-ς*) A small number of nouns with stems in *ο-* or *ω-* follow the inflections of this declension, e. g. *πειθώ, πειθό-ος*: *ἥρω-ς, ἥρω-ος* The stem of words in this declension is best recognised in Greek in gen sing, where all that remains after deducting the termination *-ος* is the stem, e. g *λέων, λέοντ-ος*; *ὄνομα, ὀνόματ-ος*. This is sometimes (but by no means always) the case in Latin, e g *comes, comit-is*, *judex, judic-is*. The final consonant will of course generally be shown in this way, but the weakness of Latin vowel sounds (p 56) often obscures the true vowel of the stem, thus in *auspex, auspic-is*, the nom *auspec-s* gives the true form (*spec-*) Often neither retains it, e g *remex, remig-is*, the true form being *ag-*; *auceps, aucupis* (true form *cap-*) Such varieties however fall under the head of Latin Sound-Lore.

There are certain differences between the inflections of the two classes thus arranged, which make it more convenient to classify *i*, *u*, and diphthongal stems under the consonantal than under the vowel declension. Thus, in Greek:—

(*a*) In gen sing consonant declension has always *-ος* (*-ως*).

(*b*) In nom plur „ „ „ *-ες*.

In Latin —

(*a*) Gen sing and nom plur end in a long vowel or diphthong in the vowel declension, in *-s* in the consonant declension

(*b*) Gen. plur. of vowel declension *-rum*; consonant declension *-um*.

(*c*) Dat, abl plur. of vowel declension *-is*, consonant declension *-bus*.

[In older Latin however some of these differences apparently did not exist for we find in nouns of the vowel declension *-aes*, *-as*, *-es* as gen. sing. of *a* stems (see below, on Gen Sing), and *-um* as term of gen plur in both *a* and *o* stems, while certain words show *-bus* in dat and abl. plur. Archaic Latin thus furnishes materials for approaching nearer to a uniform system of inflection for all stems than do the earliest traceable stages of the Greek language[1]. In Sanskrit there is but one general scheme of terminations, the classes of declension (eight in number) signifying the different modes of combining the final letter of the stem or base with the termination a system which might, no doubt, have been carried out by Latin and Greek grammarians, had there been an equally careful grammatical analysis at an equally early stage in the history of those languages, and had the formation of nouns and verbs from roots and 'crude bases' or stems been traceable with the same clearness as in Sanskrit]

---

[1] See Roby's 'Latin Grammar,' vol i. Book II. ch xii.

Nominative Singular ·—

Formed in all nouns by suffixing *-s* to the stem This *-s* is generally regarded as representing a pronominal root *-sa* (demonstrative pronoun), *sa*=Greek ὁ (cp p 66), *sā* (fem)=ἡ. In Greek and Latin the *-s* of nom sing is retained in many words, which therefore need no further explanation (e g *Aeneas*, κρίτης, *dominus*, θεός; *urbs*, πόλις, *gradus*, *facies*, βασιλεύς) From others it has disappeared, but its presence can sometimes be traced e g Latin masc vowel stems in *-a* have lost it, but such double forms of masculine words as ἱπποτης and ἱππότα (Hom), αἰχμητής and αἰχμητά, perhaps point to its having once existed More to the purpose, as evidence, are the archaic Latin forms *parricidas*, *hostiapas*, and *poeta*, *Apella*, beside ποιητής, 'Απέλλης Bopp (§ 136), Schleicher (§ 246), and others, assume its loss from feminine stems in *a-*, as *bona*, ἀγαθά, **sivā** but there is no satisfactory evidence that such stems ever took the *-s* of nom sing Benfey (' Orient and Occident,' 1 p 298) maintains that they did not

Consonant Stems (Greek)

Guttural and *Labial* stems -ς with the stem vowel becomes ξ or ψ. φύλαξ (stem φυλακ-), φλόξ (φλογ-), ὄψ (ὀπ-)

Dental Stems τ and δ never remain before ς, but disappear, the preceding vowel being often lengthened in compensation, e g λαμπάς (λάμπαδ-ς), χάρις (χάριτ-ς), τετυφώς (τετυπϜοτ-ς) In δάμαρ (δάμαρτ-), both τ and ς disappear Stems in -ντ sometimes lose both consonants before ς (τύψᾱς=τύψαντ-ς, δούς=δοντ-ς), sometimes lose τ and ς retaining ν (φέρων=φέροντ-ς)

In -ν stems sometimes the ν, sometimes the -ς is lost; the vowel being in each case lengthened, e g *τάλᾱς* (stem *ταλαν-*), *φρήν* (*φρεν-*), *χθών* (*χθον-*) and sometimes both forms are found, e g *θίς*, *θίν*, *δελφίς*, *δελφίν* (that in -*ς* being the older)

After -*ρ* stems, *ς* is lost, *πατήρ* (*πατερ-ς*) but Aeolic keeps both consonants,—*χέρς* (=*χείρ*), *μάκαρς* In *μάρτυς* (*μάρτυρ-ος*) the *ρ* disappears The solitary -λ stem (*ἅλς*) retains both λ and *ς*

In -*ς* stems the second -*ς* denoting nom sing is lost and the vowel lengthened, e g *ἀληθής*, stem *ἀληθές*

Consonant Stems (Latin) —

Guttural and *Labial* stems *s* is added to the stem, e g *vox* (*voc-*), *lex* (*leg-*), *auceps*, *urbs*

Dental stems *t* and *d* disappear before -*s* and the preceding vowel was originally lengthened in compensation, but in Classical Latin the tendency to shorten final syllables has again shortened the vowel, except in monosyllables and after *ι*- preceding Thus *pēs* (*pĕd-is*), *ariēs* (*ariĕt-is*) but *milĕs* (*milĭt-is*), *equĕs* (*equĭt-is*), etc Stems in -*nt* only reject *t* (*amans*, *amant-is*), Latin being more tolerant than Greek of combinations of final consonants, but in old Latin and in the common dialect we find *infas*, *sapies*, etc (cp the parallel forms *quoties*, *quotiens*)

In -*s* stems -*s* of nom sing is lost, and the preceding vowel originally lengthened, but in Classical Latin generally short We find however *Cerēs* (*Cerĕs-is*), *arbōs* (*arbŏr-is*) In the declension of such stems the final -*s* became *r* in oblique cases (except *vas*), and this *r* often supplanted final -*s* of nom, e g *arbōs*, *arbŏr*, *honos*, *honor*, *vomis*, *vomer*, *robur* cp with *vetus* (the -*s* being, in all cases the older form) Stems in -*n* if masc or fem lose -*ns*, as *homo* (*homon-s*), but in some words *n* is retained (*pecten*, *flamen*), and in *sanguis* (originally *sanguīs*, Lucr iv 1050)=*sanguin-s*, -*s* is retained and *n* lost. After -*r* and -*l* stems -*s* is always lost, but the preceding vowel was originally lengthened as in Greek. *sāl* (*săl-is*), *pār* (*păr-is*), *actŏr* (*actōr-is*)

In -*i* and -*u* stems *s* is generally kept (*igni-s*, *gradu-s*): but where *r* or *l* after another consonant precedes *i*, the full termination *-is* is lost, and *e* inserted before *r*; e g *acer=acri-s*, which remains as fem. nom ; *vigil=vigilis*

[In Sanskrit nom sing **-s** is omitted after consonantal stems, the vowel being sometimes lengthened in compensation, sometimes not. Thus **vāk** is nom sing from stem **vāc-**, Latin *vox=voc-s*, and **durmanās** (δυσμενής) nom sing of stem **durmanas** (δυσμενές), but **bháran** (φέρων) is nom sing of stem **bharant-** (φεροντ-) Stems in **ăr** (masc) and **ār** (fem) reject both **r** and **s**, thus **pitā** (stem **pitar**)=πατήρ, **dātā** (stem **dātar**)=δοτήρ. It will be observed that in all these words the Greek forms of nom sing. are fuller than the corresponding Sanskrit]

Nominative Plural —

Originally a reduplication of the sign for nom sing, *-sasa ;* then *-sas* (which is actually found in Vedic Sanskrit as nom plur termination in *a-* stems, e g **áçva-sas** from **-áçva-s**), and finally *-as* (Greek -ες of consonant declension), which is the form in most Indo-European languages, and survives in one of the few remaining English inflections, the *-s* of plural signification

In Greek -ες (=*-as*) is added to consonant stems, as ποιμέν-ες, ἰχθύ-ες, μάντι-ες. Sometimes the vowel of *-i* and *-u* stems is raised, e g πόλεις, πόληες, πόλεες=πόλεy-ες from πολει-, the altered form of stem πολι- (whence also the Ionic πόλι-ες without raising the vowel), and πολεῖς=πολέϜ-ες from πολευ, the altered form of stem πολυ- cp ταχέες, ἐγχέλεις In these the υ of stem has been raised to ευ, and the υ of this diphthong then changed to Ϝ, which of course disappears altogether (above, pp 43, 68)

The nom. plur of vowel stems -οι, -αι, shows no trace of final -ς, though on the analogy of Latin (see below) we should infer that it once existed It has been suggested (Schleicher, Comp § 247) that the loss of -ς began with nom. plur. of pronominal stem *ta-* (το-) i. e. τοί, ταί, this stem *ta-* according to the theory being increased by the suffix *ya*, a common derivative suffix (see above, p. 102), would form in nom plur. *tăy-as*, which by loss of final syllable would become *tăi* (τοί or ταί). and that this termination -οι -αι was gradually applied by analogy to all α- and ο- stems. This is ingenious ; but it rests upon an assumption for which there is no evidence one way or the other, and in philological enquiries it is better to confine ourselves to the *facts* of language, and to be content with unsolved problems rather than risk hypotheses.

Latin Nom Plural —

Consonantal stems, always in *-ēs*, the quantity of which is supposed to be due to analogy from the *i-* stems It is probable, however, that the original termination was *-ĕs* (corresponding to Skt as, Gk ες), which e g in *quattuor* has dropped off altogether (cp τέτταρ-ες) so in Umbrian *frater=frat(e)r-es*, Oscan *censtur=cens(t)or-es* Nom plur of *i-* stems always in *ēs* · here *ĕs* was probably added to stem, thus giving *-ies*, which became *ēs*, *īs* or *eis* (all found on inscriptions and in MSS) [Another explanation is that the stem *i-* was raised to *ey* (as πόλεις=πόλεy-ες above) so that *ovēs=ovĕĕs=ovey-es*]

u- stems in *-ūs=u-ĕs* (cp νέκυ-ες)

a- stems, nom plur. *ae* or in archaic Latin *-ai*, but it is inferred from a comparison of the other Italian dialects that the original form was *-as* (*=a-es*) e g Umbrian *urtas, totas* (=Latin *ortae, totae*, Oscan *aasas, scriftas* (*=arae, scriptae*) *Matrona* (nom plur.) found on an inscription is supposed to point to this older form in *-as* with *-s* dropped, but it might equally be an error for *matronai*, and in inscriptions a wide margin must always be allowed for merely casual errors of the cutter[1]. If *-as* is the original form, how do we get *ai*, *ae*? The most plausible theory is that the *i* here represents an increase of the stem by *i*, such as will hereafter be shown in the pronominal declension (*ha-i-c*, *haec*, etc see below, chap VII) Thus *equae=equai=equa-i-s* (*s* being dropped, as often in Latin) Or it may be supposed that the *-i-* was added, upon analogy of the pronominal declension, *after* the loss of final *s*.

In the *o-* declension we get indications that *o-es* (*-ĕs* added to the stem *o-*) was the earliest form. The various forms actually found, which lead to this inference, may be thus arranged[1].—

---

[1] Ritschl wishes to restore the form in *-as* in Plaut Trin. II IV 138 (to avoid hiatus) —

'Nam fulguritae sunt *alternas* arbores.'

a Oldest Forms 1 *Fesceninoe, pilumnoe, poploe,* (Carm. Sal), stem retained in full, and therefore probably the oldest, -*s* only having dropped

2 *ploirumē* (Epit L Scipio, see Appendix I i 2) a contraction from *oe,* but connected with the later forms in *ei, i*

b. Forms retaining -*s* (-*es,* -*eis,* -*is*) e g *modies, ques* (S C de Bacch. see Appendix I ii), *eis, libereis, magistris, hisce* (in Ter Eun ii 2 38) These forms do not appear in inscriptions earlier than 190 B C, and remain for about a century To explain the presence in these later forms of the final -*s,* which the earlier forms had lost, Corssen supposes a transition (by analogy) to the forms of the *consonant* (*i*-) declension but it seems at least as natural to suppose that in the early inscriptions we see the result of a tendency to drop final consonants, which was artificially corrected during the second century B C (when we know that the *literati* of Rome took great pains to establish a correct standard for their language), but finally prevailed, pronunciation, as usual, obtaining the victory over etymological considerations in fixing orthography.

c. The classical form in -*i.*

We therefore may trace the stages of change in these forms thus —

a- stems, *a-es, ās, a-i*(*s*), *ae*
o- stems, *o-es, ē*(*s*), *e, i.*
eis,
is.

[In Sanskrit, all masc. and fem. stems form nom plur in -*as* before which *ǐ* and *ǔ* are raised, **vác-ăs** (*vocēs*), **bhárant-as** (*φέροντ-ες*), **sivās** (**siva** + **as**), **ávay-as** (from **avi-s**).]

Nominative Dual (Greek).—

Schleicher assumes for this an original -*sās,* a lengthened form of nom. plur. (as *ī* nom dual neuter, of *ǐ* nom. plur. neuter; and *bhyâm* dat. abl. instr. dual) This -*sās* would next become *-ās*, but in all Indo-European languages it has been further weakened. in Sanskrit to **āu** (in feminine **ā-** stems to **ē**), in Greek to *ε*, which appears in the consonant declension, but in the vowel declension coalesces with the stem vowel, *ἵππω* = *ἵππω-ε*, *χώρᾱ* = *χώρα-ε*.

---

[1] See Wordsworth's 'Fragments,' etc, Introd. ix. 9.

In Latin *duo* (Sanskrit **dvāu**) and *ambo* (Sanskrit **ubhāu**, Greek *ἄμφω*) are the only dual forms.

Accusative Singular —

General type, *-am* for consonant, *-m* for vowel-stems

In Greek, *-m* becomes *-ν* by the euphonic laws of the language and with consonantal stems *-am* appears only as *-α* added to the stem, *λαμπάδ-α*, *ἥρω-α* Vowel stems retain *-ν* (*ἵππο-ν*, *φυγή-ν*). Stems in *ι-*, *υ-* and diphthongs *αυ-*, *ου-* generally form the accus sing on analogy of vowel-stems in *-ν*, *πόλι-ν*, *βότρυ-ν*, *βοῦ-ν*, *ναῦ-ν* Stems in *ευ-* however are generally treated as consonant stems (*υ* becoming *ϝ*), thus *βασιλέ-α* = *βασιλέϝ-α* (*βασιλευ-*) and the same is not unfrequently the case with other diphthongal and *ι-* and *υ-* stems. Thus we have the Homeric *νῆ-α* (*νῆϝα*) beside *ναῦ-ν*, *εὐρέα* = *εὐρέϝ-α* (*υ-* of stem raised to *ευ-*, *εϝ-*) beside *εὐρύ-ν*, and *ὀφρύ-α* and in the other case-endings of *βοῦς*, *βοῦ* is treated as a consonant stem (*βοϝ*), *βο-ός* = *βοϝ-ός* (Latin *bov-is*) So too *πόλη-α* = *πόλεy-α* (*πόλι-s*) beside *πόλι-ν*

The *neuter* accus in consonantal stems is merely the stem subject to euphonic laws of the Greek language e.g. *τέρας* (*τερατ-*), *μέλι* (*μελιτ-*), *φέρον* (*φεροντ-*), *γλυκυ-*. in vowel stems it ends in *-ν*.

In Latin, *-m* is the invariable ending with masc. and fem stems. The *-em* of consonantal declension is said not to represent I. E. *-am*, but *i-m*. i e the stem lengthened by *-i*, which then became *-e* before *m*, in both stems thus lengthened and original *i-* stems, with a few exceptions among the latter[1]. It is no doubt desirable to regard these few accusative forms in *-im* among the mass of forms in *-em* as survivals of a more primitive form. It might, however, be maintained that *-em* as seen in *pedit-em, equit-em* at first represented *-ăm* (*e* being a regular variety of original *a*) and that this *-em* coalesced with the final vowel of *i-* stems into *-īm* or *-ēm* (*i-em*), *-im* being the earlier form, and that finally the analogy of this *-īm* or *-ēm* caused the *-em* of purely consonantal stems to be regarded as a long syllable, upon the erroneous inference that *-ēm* was exactly the same in all words which exhibited it This view is not less consistent with the observed facts of languages, and obviates the difficulty which cannot but be felt in the theory of a different structure for one of three words so obviously parallel as Sanskrit **vác-am**, Old Bactrian **vāc-em**, Latin *voc em* This Old Bactrian accus in *-em* of consonantal stems seems to furnish a clear link between Sanskrit **-am** and Latin *-em*, e g **barent-em**, cp. with Sanskrit **bhárant-am**, Latin *ferent-em* Moreover, Latin *-em* regularly answers to Greek *-ă*, as *ἑπτά septem, δέκα decem, ἐννέα novem* compare *κρῖμα crīmen*, etc, also *ἑκατόν centum*

---

[1] The following nouns form accus. in *-im*, and ablat. in *-i*.—
Always—buris, tussis, sitis, vis, Tiberis, etc
Generally—febris, pelvis, pulvis, restis, securis, turris.
Occasionally—clavis, navis, sementis.

To the vowel stems in *-a* (*-o*) *-m* was added, *bonum* (*bono-m*), *musa-m* *-m* as we have seen (chap. iv p 73) was weakly sounded in pronunciation, and is accordingly omitted on some old inscriptions

Accusative Plural —

General type, *-ns*, i e addition of *s* to termination of accus sing *m*, which by assimilation to the dental sibilant *s* becomes *n* This *-ns* is retained only by Gothic, the euphonic laws of which did not forbid such a combination at the end of a word, e g *gastins* (stem *gasti-*), *sununs* (*sunu-*) but there are traces of it in both Greek and Latin, and also in Sanskrit and Zend.

Greek Accus Plur · formed by addition of *s* to acc sing, but *-νς* only retained in the Argive and Cretan dialects, e.g *τόνς*, =*τούς*, *πρειγευτάνς*=*πρεσβευτάς* Elsewhere, in the vowel declension, *ν* disappears, the vowel being usually raised in compensation, e g *ἵππον-ς*, *ἵππους* (Doric *ἵππως*, like Latin *-ōs*), *χώρανς*, *χώρᾱς*. In Lesbian *-ονς* and *-ανς* became *-οις*, *-αις* thus *κάλαις* =*καλάς*, as in Pindar we have *φιλήσαις*=*φιλησανς*=*φιλησαντ-ς*, Attic *φιλήσας*. In consonant stems *-ς* follows *-α* of acc. sing making -*ας* but in *ι*- and *υ*- stems there is variety of form, thus beside *πόλι-ας* and *πόληας* we have *πόλῑς=πόλιν-ς* *πόλεις*, the ordinary accusative, is perhaps best taken as =*πόλεy-ας* (see above on nom plur, p 105) but it might also represent *πόλιν-ς*, and be = *πόλις* With neuters, *α* is added to the stem

Latin Accus Plur of masc and fem stems always in -*s*, with long vowel preceding by compensation for the loss of -*m*-, thus -*ās*=-*am-s*, -*ōs*=-*om-s*, *ēs* (*īs*)=*ems* (*ims*), -*ūs*= -*um-s* To neuter stems -*a* is added, *corpora*=*corpos-a*

[In Sanskrit, traces of the termination -*ns* are found but in vowel-stems usually either **n** or **s** disappears and the vowel is raised, e g **áçva-s** (*equus*), acc plur **áçvān**, **áçvā** (*equa*), acc plur **áçvās** So **ávī-n** (masc), **ávīs** (fem) from stem **avi-**. To masc and fem consonant stems, and monosyllabic vowel stems, **-as** is added, **vā́c-as, áçman-as, nā́v-as** (**nau**)]

The *Accusative Dual* in Greek (as also in Sanskrit masc and fem) is the same as nom dual. In Latin *duo, ambo* have also a form *duos, ambos*, on analogy of plural, and in fem only this form (*duas, ambas*)

Vocative Singular —

This, it has been already said (p 105), seems to be in Indo-European languages no 'case,' but the mere stem used as an interjection.

It has however been suggested, with some probability, that the vocative is originally the nominative with the accent drawn back so that the final syllable became shortened in pronunciation. The evidence for this is (1) the fact that in Sanskrit the vocative is always accented on the *first* syllable, when accented at all, i e at the beginning of a sentence, (2) that in Greek a certain number of words accented oxytone in the nominative throw the accent back as far as it will go in the vocative (e g *ἀδελφός, πονηρός, πατήρ*, but *ἄδελφε, πόνηρε, πάτερ*). It is also noted that in Greek, if an oxytone noun becomes a proper name, in a majority of cases the accent goes back (e g. *ἀμοργός, Ἄμοργος*): and there is a passage in Aulus Gellius on the pronunciation of *Valéri* as gen or voc sing. of *Valerius* As vocative, he says, it was accented *Váleri*, as genitive, *Valéri*.

In Greek guttural and labial stems, the nom. is used as voc. (except *γύναι*=*γυναικ-*) but in dental stems the mere stem is used, subject to euphonic laws, e g. *παῖ* (*παιδ-*), *ἄνα* (*ἀνακ-*), *γέρον* (*γεροντ-*) *πούς* however (stem *ποδ-*) and the nom sing of participles in *-ας*, *-εις*, *-ους*, *-ων* (stems in *-ντ*) are used as vocative. The voc in *-ε* of *ο-* stems is the stem with *ο* sunk to *ε* *θεός* however (as *Deus*) is generally used for voc. (though in Matt xxvii 46 we have Θεέ *μου*), so φίλος (Hom Od iii 375) and *οὗτος* The voc termination *-οι* of *πειθώ*, *αἰδώ-ς*, etc, is anomalous, it appears however to stand to nom sing. in *-ω* as Sanskrit voc. of fem **ā** stems (e g **açvē**) stands to the nominative for **ē**=**-ai**

In Latin the nom sing is used for vocative, except in masculine stems in *o-*, where the stem with *-o* changed to *ĕ* is used In *puer* (for *puer-us*) the abbreviated form of nom is also voc but *puere* is found in Plautus

The Vocative Dual and *Plural* in Sanskrit and Greek, and the *Vocative Plural* in Latin are the same as the respective nominatives

Genitive Singular :—

There appear to have been two forms of Indo-European suffixes for the genitive case, viz for *a-* stems (*a-*, *o-*), *sya*, for all others, *-as* or *-s* These suffixes are probably pronominal in their origin, and *sya* is perhaps compounded of the two roots *sa*, *ya* but of this we can have no evidence[1]

Greek Gen Sing .—

In consonantal stems *-ος* (=*-as*) is added to the stem · *ποδ-ός*, *γένους* (=*γένεος*=*γένεσ-ος*) *-ος* is sometimes raised to *-ως* (*πόλε-ως*, *βασιλέ-ως*) In diphthongal stems *υ* has generally passed into *Ϝ* (consonantal) and thus disappeared, *βοϜ-ός* (*βου-*), *βασιλέϜ-ως*

---

[1] The old view that *-sya* of gen sing appears also as an adjectival suffix in *δημό-σιο ς*, so that the Homeric genitive *δήμοιο*=*δημόσιο*, the stem of the adjective, though plausibly supported by the identity in Sanskrit and other languages of genitive termination with adjectival suffixes (cp. Max Muller, Lectures I. iii), cannot, I think, hold against the question, Why then do we never find *δημοῖος* instead of *δημόσιος*? If *-σιο-*=*-sya*, the *s* would surely have disappeared between two vowels, as usually in Greek *σιο* in *δημό σιο-ς* is the adjectival suffix *τιο*, the *τ* being change before *ι* to *ς*, according to the universal tendency of pronunciation both in Greek and Latin. See above, p. 78.

(βασιλευ-). In υ- stems forms like γουνός (γονυ-,) δουρός (δορυ-) are transpositions from γονυ-ός, δορυ-ός while γλυκέ-ος, ἄστεος, etc, show that the stem vowel υ has been raised to ευ (εϝ) and become diphthongal, thus γλυκέος=γλυκέϝ-ος is analogous to βασιλέ-ως=βασιλέϝ-ος Similarly πόλε-ως and Homeric πόλη-ος =πόλεy-ος, the stem vowel remaining unaltered in Ionic πόλι-ος

Fem. *a*- stems have *-as* or *-s* added to the stem vowel, σοφίας, φυγῆς Masc and neuter stems in *o*- originally formed gen by addition of -σ*y*ο, whence the Epic gen in -οιο, ἄγροιο=ἄγρο-σ*y*ο by omission of σ[1]. The Attic gen in -ου (Aeolic -ω) arises by contraction from the intermediate form -οο=-όσιο, with first σ and then ι omitted, a few examples of which occur in the Homeric poems, e g Αἰόλοο κλυτά Od x. 60, Ἰλίοο Il. xv 66, xxi. 104, ὅο Il ii. 325, Od i 70, ἀγρίοο Il xxii 313.

From masc. stems in α- we find three forms in Homer (1) -ᾱο, (2) -εω (Ἀτρείδεω), in which the quantity of the two syllables -ᾱο is transposed, and α weakened to ε (-εω then becomes one syllable by synizesis and the accent remains unaltered in spite of ω in final syllable, as with πόλεως, etc), (3) -ω by contraction from -αο (after vowels), Ἑρμείω, βορέω (Ἑρμεία-ς, βορέα-ς) Aeolic has -α (ο being lost), Ἀΐδᾱ, Κρονίδᾱ. The earliest form in -αο is probably =α-σ*y*ο, α*y*ο, but Curtius, in his work on Greek Etymology, derives -ᾱο from ᾱος=**āyas**, the gen sing termination of Sanskrit fem stems in -*ā*, which change the stem vowel **-ā** into **ai** (*ay*) before *-as*, e g **áçvā** (*equa*), gen **áçvāyas**, but **áçva-s** (*equus*), gen. **áçva-sya** The Attic gen in -ου is a contraction from -εο, which is for -αο, πολίτου=πολίτα-ο

Latin Genitive Singular —

The suffix *-as* appears in Latin as *-os*, *-us*, *-es*, *-is*

(1) *-os*, *senatu-os* in S. C de Bacch (Appendix I ii).

(2) *-us*, on inscriptions up to the end of the seventh century, A. U C (rarely after 100 B C), *Cererus*, *Caesarus*, *hominus*, *Venerus*, etc. From this in *u*- stems arose the contraction *ūs* =*uus* (*domuus* inscr). It also survives in *alius*, *illius*, etc.

---

[1] In the Thessalian dialect, the gen. sing of *o* stems often ended in -οι, about which there are two views (1) that it =-οιο, *minus* the final *o* (Ahrens, 'De Dialectis Aeolicis,' p 221; 'De Dialecto Dorica,' p. 528 sqq.), (2) that it is an old locative used in a genitive signification.

(3) *-es*, on inscriptions before the Second Punic War, *Salutes*, *Apolones* and again in late Latin, *Caesares*, *campestres*, etc

(4) *-ĭs*, the ordinary gen sing of consonant stems proper The *is* of *i-* stems (*ovis*) was perhaps originally *īs*=*i-os*. thus *ovis*=*ovi-os*, as we find a form *alis*=*alios* (*alius*) The tendency to shorten final syllables, aided by the tendency to see analogy between two similar terminations *ovīs*, *nominĭs*, would sufficiently account for the subsequently uniform *-ĭs* of both consonant proper and *i-* stems *-ĭs* is obviously parallel to Greek *-ος*, cp *genus*, *gener-is* with *γένος*, *γένεσ-ος* (*γένεος*, *γένους*)

The *u-* stems exhibit the greatest variety of gen sing. inflection. thus we find (1) *-uos* as above, (2) *-uus*, as above (in some cases however *-uus* may be due to a method of denoting the length of a vowel by doubling it, introduced by the tragic poet Accius, and prevalent on inscriptions from about 130–75 B C, found also regularly in MSS of Pliny the elder, where *-uus* represents *-ūs* of gen sing nom and acc. plur of *u-* stems), (3) *-uis*, retained in *su-is*, *gru-is* (which then, by analogy, are declined like *i-* stems), and used by several writers up to temp Cicero, e. g. *senatuis*, *domuis*, etc, quoted by Gellius, *quaestuis* (Ter Hec 735), *fructuis*, *victuis*, etc (Varro), (4) *-i*, perhaps an analogy of *-o* stems (from similarity of nom sing *-us*), or possibly from some confusion with the past part in *-tus*, most of the examples being from words where *t* precedes the stem vowel *u-*, e g *adventi*, *quaesti*, *ornati* (all in Terence), *senati*, *fructi*, etc (see Roby's Latin Grammar, vol i § 399), (5) the ordinary termination *-ūs*, by contraction from *-uus* or *-uis*

In *o-* stems the gen ends in *-i* or *-ei* (inscriptions from the time of the Punic Wars to Augustus). Three explanations of this termination are suggested —

(1) That it is a *locative*, which has supplanted the old genitive This would account for, and has probably been suggested by, the apparently abnormal grammatical usages of *Romae*, *Tarenti* in a locative sense, these, however, may be otherwise explained (see below, p. 126)

(2) That like Greek *-ου*, it arises from the termination *-sya*, i. e. *agri*=*agroi*=*agro*(*s*)*i*(*o*). This gives at first sight a plausible

parallel between the Greek and Latin *o-* declensions, but the only real parallel to this supposed Latin abbreviation of *-syo* is the Thessalian gen in *-οι* mentioned above (p 112), and Bopp truly points out that '*lupi* and *lupae* from *lupai* rest on the same principle, and if *lupi* proceeds from λύκοιο, whence can *lupai* be derived, as the corresponding Greek feminine nowhere exhibits an *-αιο* or *-ηιο*?' (Comp Grammar, § 189)

(3) That the original termination was *o-is* (i e. *-as* added to the stem), the final *-s* being lost, and *-oi* contracted to *-i*. This explanation is made more probable by traces of a final *-s* in the other Italian dialects e g Oscan *suveis* (*sui*), *Pumpaianeis* (*Pompeiani*), Umbrian *puples* (*populi*), *katles* (*catuli*), etc, which lead us to infer an Italic genitive in *-ois*, whence Oscan *-eis*, Umbrian *-es*, Latin *-i* The analogy of fem. *a-* stems will also bear out this conclusion For them we have in *paterfamilias* and the old genitives *terrās* (Naev), *viās* (Enn), etc. distinct evidence of a termination *-ās*, the readiest solution for which is that it is a contraction for *-a-is* (*is*=*as* added to the stem), a termination found in one old inscription in *Prosepnais*=*Proserpinae*, and on vulgar inscriptions (not before seventh century A U C) appearing as *-aes* or *-æs* (chiefly in proper names of freedwomen and slaves *Juliaes*, *Anniaes*, *Vernaes*, etc) The other form in *-āi* (Lucr. and Virg) or *-ae* may then be traced to the same *-ais* by loss of final *-s*, and corresponds exactly to *agri*=*agroi* from *agro-is* This explanation, which reconciles the two forms *-as* and *-ai* (*ae*), and harmonises the declension of both masc. and fem *a-* stems (*o-* and *a-*) appears upon the whole the simplest and most satisfactory.

Of stems in *-e* four forms of gen. sing. are found, viz *-ēs* (*rabies*, Lucr. IV. 1083), *-ei*, *-ē* (*fide*, Hor. Od III 7. 4, *die*, Virg. G I 208) and *-i* (e. g. *dii*, a variant for *die*, in Aen. I. 636; see Roby, Latin Grammar, I § 357) Of these *-ē* and *-ī* are contractions of *-ei*. *-ei* and *-es* are phonetic varieties of *-ai* and *-as* of the *a-* stems, and the explanation above given covers them

Genitive Plural —

An original Indo-European type *-as-ams*, i. e. *-as* (gen. sing.)

+ *-am* (pronominal element found in *bhy-am* etc. see p 120) + *-s* (plural sign), is imagined by Schleicher and others which *-asams*, it is supposed, would gradually sink to *-asām*, *-sām*, *-ām*. Of these forms, *-ām*=Greek *-ων*, Latin *-um*, *-sām*= Latin *-rum* of *a-* and *o-* stems, while the quantity of *o* before *-rum* (*equōrum* from stem *equŏ*), and of Sanskrit **têshâm** (*horum*) from stem **ta** (*hic*) perhaps points to *-asam*, whose initial vowel coalescing with the stem vowel would make a long syllable. [In Sanskrit only the pronominal declension retains this trace of a longer form **-sām** or **-asām** with nouns, **-ām** is added direct to consonant stems, e g. **vāc-ām** (*voc-um*), while vowel stems are increased by *n* before the addition of **-ām**, e. g. **ăçvā-n-ām** (**áçva-s**), **ávī-n-ām** (**avi-**)]

Greek Genitive Plural, *-ων=âm* is added to the stem The *o-* of *o-* stems coalesces with it, *λύκων=λυκό-ων* and the same is apparently the case with *α-* stems, viz *χωρῶν = χωρά-ων* The fem. gen. plur, however, is *always* accented with circumflex, the masc only when the accent of nom. sing. is oxytone and it has been supposed that this difference points to an original difference in formation, the *ā-* stems having the suffix *-σων* (*-sām*); so that *χωρῶν=χωράσων*. This is to some extent borne out by the Homeric form *ā-ων* of such gen plur, and the comparison of e g *τά-ων* gen. plur. fem with Sanskrit **tā-sām** (*harum*) from stem *ta*. *σ* would of course naturally fall out between two vowels (p. 66). *τά-ων*, *is-ta-rum* and **tā-sām** would thus be parallel forms.

Latin Genitive Plural Formed by adding *-um* or *-om* (found in *u-* stems, and in *o-* stems after *u* or *v*) to consonantal *o-*, *i-*, or *u-* stems: e g *fulmin-um*, *avi-um*, *magistratuom*, *fructuum*; and *-uum* sometimes contracted into *-um*, *passum* (Lucilius, Martial), *currum* (Virg. Aen. vi 653) Many consonantal stems are increased by *-i* on analogy of the *-i* stems, e.g. *merc-i-um* *penat-i-um* *amant-i-um* (also *amant-um*, which is not a contraction of, but an earlier form than that in *-ium*) but this addition is very rare with stems ending in *-n*, *-r*, *-s* (except *vir-i-um*, *complur-i-um*). Some consonantal stems follow the analogy of *-u* stems, e g *alitu-um* (Lucr. and Virg) beside *alit-um*

o- stems (masc. and neut) add either *-um* (*-om*) or *-orum* (*-asam*) to the stem. The first is not, as sometimes regarded, a contraction of the longer form it is in fact probably the older, being the only one known to the Umbrian and Oscan dialects, occurring exclusively on early coins of fifth century A U C, and most frequently on inscriptions of an early date (*Romanom*, *sovom*=*suorum*, *divom*, etc.) The other form in *-ōrum* gradually superseded it, and occurs commonly on inscriptions of the second century B C and later· and in and after Cicero's time[1], the form in *-um* was found only in certain words e. g *nummum*, *denarium*, etc , *deum*, *ducentuum* and other numerals, especially distributive, *deum*, *divum*, *virum* and compounds, *Italum*, etc , *nostrum* and *vestrum* (see below, p 136) *a-* stems form gen plur in *-ārum*, but *-um* is formed (1) from masc. patronymics in *-des* (*Aeneadum*, etc), (2) compounds of *gigno* and *colo* (*terrigenum*, *caelicolum*)—both in dactylic poetry only, (3) from the fem. stems *amphora*, *drachma* (but these are probably borrowed from Greek) *-e* stems have the form in *-rum* (*dierum*, etc)

The forms *boverum*, *nucerum*, *regerum*, *lapiderum*, noticed by Varro, seem (if genuine) to point to the occurrence of the longer form in consonantal stems with $e = i$ as a connecting vowel, *i* being suffixed to the stem as with the other form in *-um* where the termination *-ium* is formed from a purely consonantal stem Another explanation supposes an addition to the stem of *-er*, because in some words an *-r* is found in gen. sing (*acipenseris*, *cucumeris*, etc.), and is therefore perhaps not peculiar to the plural number in the words in question

The *Genitive Dual* agrees in form with the Dative Dual (p. 123).

Ablative Singular —

The Ablative has been retained as a distinct form in Declension only by Old Persian (Zend) and Latin. Sanskrit preserves it in masc and neut **a-** stems, Greek in adverbs in -ως, where ς = **t** of Sanskrit ablative, this **-t** probably representing an original *-d* retained in Old Latin and in Zend

---

[1] See Cicero, 'Orator,' xlvi § 155, and compare Roby's 'Latin Grammar,' § 365 (vol. i. p. 124).

Thus ὅμως=ὅμωτ=**samāt**, abl. of **sama**, 'similar ' πῶς (Ionic κῶς)=I E *kvat*, abl of *kva*. The Sanskrit **a-** stems (masc. and neutr) preserve the final **-t** (**çivāt, áçvāt**) in all others the ablative is identical in form with the genitive in **-as**, such merging being prevented in the **a-** stems by the retention of the longer genitive form in **-sya**.

Latin Ablative Singular.—

Here the original *-d* (as in Zend *d*—written *t* by Schleicher) has been retained, but is only found in Old Latin and Oscan, being lost in Classical Latin and Umbrian Thus we find on inscriptions *senatud, praidad, gnaivod* (Ep Scip Appendix I 1 1), *sententiad, couentionid*, and the adverbs *suprad, extrad, facilumed* (S. C de Bacch, Appendix I. ii) This form *facilumed*, with e g Oscan *amprufi-d* (=*improbe*), suggests that the ordinary adverbial termination in *-e* is an ablative in *-ēd*, from adjectives in *-us, -a, -um*, and thus distinguished in form from the masc and fem ablatives in *-od, -ad* (which are also sometimes adverbial, as in *cito(d), supra(d), contra(d)*, etc) The original quantity of the adverbial ablative in *-ē(d)* is generally retained, though shortened in some words in constant use, e g *benĕ, malĕ*

In *o-*, *a-*, *e-*, and *u-* stems, the long vowel of the ablative *-ō, -ā, -ē, -ū* seems originally to have been followed by the characteristic *-d*, which however fell off at an early period The latest inscription on which it occurs is the S C de Bacch. (186 B C), a formal legal document with much in its orthography that was archaic at the time, and it is by no means found constantly even in the earliest inscriptions. Thus on that of Scipio Barbatus (see Appendix I. 1 1) we find *gnaivod*, but *patrē*, while on the other Scipionic inscriptions it hardly occurs at all. Ritschl, indeed, holds that it was in use in the time of Plautus, whom he assumes to have used it or not at pleasure and accordingly he restores to the text of Plautus forms like *med, ted, sed* (*me, te, se*) almost *ad libitum* for metrical convenience[1]. Corssen however maintains that the final *-d* of abl. sing. was no longer heard or spoken; and therefore not likely to have been written, in the time of Plautus and Ennius, admitting at the same time that Plautus *might* have availed himself occasionally *metri gratia* of an archaic form no longer in use, just as Virgil in later times used the archaic genitive *aquai*, or infinitive *farier*[2].

• In consonant and *i-* stems we find both *-ī* and *-ĕ* as abl terminations In classical Latin, most adjectives in *-is* have *-i* (thereby securing a distinction from the neut. sing in *-ĕ*), most substantives and participles *-ĕ* Some substantives however regularly have *-i* (see above, p. 108, note), in others which usually have *-ĕ*, *-i* is also found, especially in Lucretius (see Munro on i 978) In late and vulgar Latin all ablatives in *-i* are weakened to *-ĕ* The history of the forms is as follows. The original form was probably *-īd* (I E *ât*), seen e g in *marid* (Columna Rostrata, B C 260), *coventiomid* (S C de Bacch), and traceable in *ante-hac* (the non-elision of which is perhaps due to its original form *antid-hac*) This *-īd* became *-ēd* and then *-ē*, which quantity is found on the Epit of Scipio Barbatus (Appendix I i 1) in a Saturnian verse, *Gnaivod* | *patrē* | *progna* | *tus* || ., and Plaut Capt iv 2, 28 (trochaic), *Tum pistores scrofipasci qui alunt furfurē sues* From 150 B C onwards *-ĕ* becomes most common *-ei* and *-ī* are also found e g. on Ep Scip 4 (Appendix I. 1), *virtutei*, ablat., and *-ī* in consonantal stems, *luci* Plaut Aul iv 10, 22, Ter. Ad v 3, 55, Lucr. iv 235, Cic Phil xii. 25. The tendency of pronunciation to obscure and weaken all final syllables brought all these forms at last down to the weakest form *-ĕ* (see above, p. 57).

---

[1] Ritschl, 'Neue Plautin' Excurs i. 106

[2] 'Ueber Aussprache,' etc II pp 1005–1008 The objections here urged by Corssen appear almost conclusive against Ritschl's view —e g his citation (1) of many instances from Plautus where the final vowel of abl sing coalesces by 'synaloepha' with a following vowel, with no such traces of the influence of a final *-d*, as are found for example in Homer of the lost 'digamma', and (2) of examples from Ennius of ablat in *-ĕ* (*vocĕ videtur*, *cordĕ meo*, etc in hexameters) without a trace of length by position The shortening of this *-e*, it may further be observed, is itself a subsequent process, presupposing the entire disappearance of *-d* from the original ending *-ēd* (see below)

The Ablative Plural agrees in form with the Dative Plural (see p 129)

Locative Singular.—

The general type is *-i*, for Indo-European noun-stems; but pronominal stems have *-in*, which is the older form (The locative termination of fem. stems in Sanskrit -ām seems to point to the oldest form of the suffix) The locative is retained as an independent case in Sanskrit, Zend, Slavonic, Lithuanian, in Greek, Latin, Teutonic, and Keltic, it has coalesced with the dative and genitive (its functions being also shared with gen. and abl in Greek and Latin)

In Greek, the dative singular in -ι is properly a locative form ποδ-ί, γέροντ-ι, etc., and the locative meaning is retained in such forms as Μαραθῶνι, Σαλαμῖνι, νυκτί, κ τ λ The dative of ο- and α- stems is a true dative (see below, p. 127) but side by side with it we find locative forms such as οἴκοι (οἰκο- + ι), χαμαί (χαμα + ι) This locative -οι of ο- stems becomes in Aeolic υι—πυῖδε, μεσυί, and in Doric -ει, e. g πεῖ (ποῖ), τηνεί, τουτεῖ, τεῖδε this form in -ει being also found in Attic ἀμαχεί, πανοικεί, ἐκεῖ (= ἐ-κο-ι from stem κο-) ἄγχι is perhaps locative (= ἄγχει) from a stem ἀγχο-, whence ἀγχοῦ and αἰεί might be locative of a stem αἰϝο = Sanskrit ēva, Latin *aevo-* though the Doric form αἰές points rather to a stem in -ς, the locative of which is αἰε(σ)ί. μοί, σοί (Doric τοί) are probably locatives

In Latin there are but few traces of a distinct locative case, the locative, both in form and functions, having become merged in either the ablative or dative (? genitive) case In consonant declension forms like *rurī*, *vesperī*, *herī* (= *hes-i* from *hes*, Greek χθές, cp. *hesternus*) *may* be locatives, but are not distinguishable from dat or abl. in *ī*

From *o-* stems *humi*, *belli*, *foci*, *Corinthi*, etc. are perhaps locatives, but are assimilated in form to the dative (as in *illi*, *soli*) or the genitive. *Postri-die*, *quotidie*, etc, and in Old Latin *die quinti*, *die crastini*, seem to point to a locative form merged in the dative. and so *Romae*, *militiae* (*Roma-i*, *militia-i*) are perhaps originally locatives formed by adding *i* to the stem, but are now undistinguishable from the gen. or dat.

Perendie, *jam* and the pronominal adverbs in *-im* (Appendix II, A) are supposed to indicate the still older locative termination *-in*=*-am*.

[The locative terminations in Sanskrit are -i (consonant and diphthong stems), -āu (masc stems in i- and u-, the stem vowel disappearing), -ām (fem. stems in ā- ī- ū-), -ē (=a+i masc. and neut stems in a-), and -in (only in pronominal declension).]

Locative Plural.—

From the forms of this case in the Asiatic branch of Indo-European languages (Sanskrit -su, -shu, Zend *shva*, *shû*, *-shu*, *-hva*, *-hû*, *-hu* and Old Persian *-suvâ*) an original type *sva-sa* (*sva* pronominal, and *sa* plural sign) is postulated by some philologists (Schleicher, Comp § 256) However this may be, the Sanskrit -su evidently corresponds to the Greek *-σι* or *-σσι* (*σϝι*) of the dative plural, which is thus, like the dat sing. in *-ι*, really locative. *-σι* or *-σσι* are sometimes added direct to consonant stems, sometimes by a 'connecting vowel' *ε* · e. g *ποσσί* (=*ποδ-σι*), but also *πόδ-ε-σσι* (Epic), *κυσί* and *κύν-ε-σσι* (*κυν-*), *πολί-ε-σσι*, *πόλισι* and *πόλεσι* from *πόλι-* In *ο-* and *α-* stems the forms *ἵπποισι*, *χώραισι* may (as is suggested by some) result from a lengthening of the stem by *ι* (*ἵππο-ι-σι*, *χώρα-ι-σι*) but it is simpler to regard them as formed by the addition of the plural sign *-σι* to the locative sing (*ἵπποι-σι*, *χώραι-σι*) In a few feminine forms like *θυρᾶσι*, *Ἀθήνησι* the termination *-σι* appears to be added to the stem, unless we may suppose these forms to have been written with an '*ι* subscriptum,' like the Epic forms *-ησι*, *-ης*, which are from lengthening of *α* in *-αῖσι*, *-αις*.

In *Latin*, the locative plural is merged in the form of dat and abl plur. The dat. abl. in *-is*, however, of *o-* and *a-* stems is very possibly a locative form (see below, p 129).

No *Locative Dual* is found in Greek or Latin: but Sanskrit has a form ending in -ōs.

Dative Singular —

General type *-ai*, Sanskrit -ē, Greek -*ῳ* (=*ο-* *οι*), *ᾳ* (=*α*+*αι*), Latin *-i* Different views are held as to the origin of this termination, viz.:—

(1) That it is a strengthening of the locative *-i*

(2) That it represents the preposition *abhi*, *bh* being lost, as in Sanskrit **çivais**, instrumental plur of **çiva**, and as *φ* is lost in Doric *ἐμίν* and Epic *τεΐν* (=**ma-bhyam, tu-bhyam**) These pronominal datives (cp Latin *tibi*, *sibi*, etc) give *bh* and as pronouns generally preserve more archaic forms than nouns, they perhaps point to the original form of the dative The use of the preposition *abhi*, 'towards,' to form the dative would be analogous to the Latin idiom of *ad carnificem dabo*, etc found in Plautus, and to the use in modern languages of the prepositions *to*, *à*, *zu*, etc to express the dative

In Greek *a-* stems, (*a-*, *η-*, *o-*) alone have the true dative termination, *οἴκῳ* = *οἰκο-* + *οι*, *θεᾷ* = *θεα-* + *αι* in all others the locative in *ι* is used Infinitives in *-μεναι*, *-εναι*, *-ναι*, *-αι* are probably datives of consonantal stems (see below, chap VIII)

In Latin, the dative in *-ī* of consonantal and *i-* and *u-* stems perhaps represents Indo-European *-ai* Inscriptions of fifth century A U C give *-ē*, which is analogous to Sanskrit **-ê = -ai** e g *Junone*, *matre*, *salute*, *Diove* (*Jovi*) and this form appears to have been retained in some technical phrases, e. g *solvendo aere alieno*, *jure dicundo* in Livy and Suetonius Umbrian has *-e* *patre* = Sanskrit **pitrē** (*patri*) Later inscriptions (sixth century A U C. to time of Augustus) give *-ei* · e g *quoiei* (Ep Scip 4, Appendix I 1), *Apolenei*, *Diovei*, *Hercolei*, etc Oscan has *-ei*, *paterei*, *Diuvei*, etc Finally *-ei* became *-i*, which does not appear on inscriptions before the date of the Gracchi Corssen considers *-ei* to be the original dative suffix and *-i* the locative Schleicher (Comp. § 254) regards *-i*, *-e*, *-ei* as varieties of the same form, but locative It would seem perhaps more reasonable to regard the three forms as identical and the history of Latin orthography will supply many analogies to this variety of spelling (e. g *ni*, *ne*, *nei* cp Ritschl's view of the relations of *ē*, *ei*, and *ī* quoted in Roby's Latin Grammar, vol i. § 268).

In *a-*, *e-*, *o-* stems the oldest forms appear to be *-ai*, *-ei*, *-oi*, (*quoi*, *populoi*, traceable in *huic* = *hoic*) With such stems the first letter of the termination *-ai* united itself to the stem vowel, and the results *-ōī*, *-āī*, *-ēī* seem to have been sometimes pronounced as dissyllable, as is still the case with *-e* stems, where the full form is retained[1]

In *o-* stems the final *-i* was dropped (*populo=populō-i=populo-oi*): just as in Greek (*ἵππῳ=ἵππω-ι=ἵππο-οι*, etc), where however the traces of *i* remain in 'ι subscriptum' In *a-* stems *i* survives in Classical Latin *-ae=ai* but dative forms like *Matuta*, *Tusco-lana*, etc are parallel to Greek *θεᾷ=θεαῖ=θεα-αῖ* and Latin *populo*, in the loss of *-i* In *e-* stems also a similar form in *-ē* is found e g. *diē*, Plaut Capt iv 2, 20, *fidē*, Aul iv 6, 1, Trin i 2, 80, *faciē*, Lucilius, etc and a monosyllabic pronunciation *metri gratia* of *-ei* gives the intermediate stage. Compare the remark of Aulus Gellius (ix 14), 'In casu dandi qui purissime locuti sunt non "faciei" uti nunc dicitur sed "facie" dixerunt'

Dative Plural —

General type *bhyams*, i. e *bhyam* of dat sing (as seen in Sanskrit pronominal declension, p 143) + plural sign *-s* The Old Prussian *-mans* of dat plur is the natural representative, by the laws of phonetic change, of Indo-European *bhyams*, and therefore confirms the inference that this is the primitive form. *-mus* in Lithuanian (*mumus*, *jumus=nobis*, *vobis*) points to the same form: for if the original had been Sanskrit *bhyas*, Lith. would have *-mas*, but *u* is accounted for by the nasal *m*

This case form appears in all Indo-European languages except Greek, which employs locative plur., as in sing (see p 126). In Sanskrit *-bhyams* becomes -bhyas (cp. acc plur *-as=am-s*, p 116)

In Latin, *-bhyas* becomes *-bios* or *-bius*, then *-bos*, *-bus* (for loss of *i* cp *min-us=minius* and see also on p 59): and a parallel form appears in *no-bis*, earlier *nobeis* This *-bus* is the regular termination for consonant, *i-*, and *u-* stems, and is also found in *ambo-bus*, *duo-bus* (*o-* stems), *deabus*, *filiabus*, *liberta-bus* on inscriptions, and *amba-bus*, *duabus*, classical (*a-* stems); *diebus*, *rebus*, classical (*e-* stems). *-i* is usually added before it to consonant stems (*nomin-i-bus*, etc), but in *bo-bus*, *bu-bus*=*bov-bus* we have possibly the remnant of an earlier formation by adding *-bus* direct to the stem. In *ĭ-* stems *i* is found as *e* in Old Latin, e. g. *tempestatebus*, *navebos* and in *u-* stems, *u* sometimes becomes *i*, as *fructibus*

---

[1] The dative termination *-ei* of the ordinary fifth declension seems to have been variously scanned as *ē-ī*, *ĕi*, and *ĕī*, see for examples Roby, Latin Grammar,' § 306 (i p. 122).

The dat. (also abl.) plur of *o-* and *a-* stems (with the exceptions above given) ends always in *-is*, of which form there are two explanations.—(1) that it is dative, arising from *-fios* =*-bhyas*, which then becomes *-hios* (cp *mi-hei* beside *ti-bei*) and then by contraction *-is* (see Schleicher, Comp. § 261, and on *f*=*bh* above, p. 69) This however is very hypothetical; and it seems simpler to believe (2) that *-is* is a *locative* termination, so that *musis*, *dominis*=*musais*, *dominois*=*musaisi*, *dominoisi*, and correspond exactly to Greek *χώραισι*, *ἀγροῖσι* (see above, p. 127) That *-ois*, *-ais* were the original terminations of the dat plur is shown by the old forms *oloes* (*illis*), *privicoles* (*priviculis*) noticed by Festus, and by the other Italian dialects Thus an old inscription (possibly of Latin origin ?) gives *suois*, *cnatois* (*suis*, *gnatis*) Oscan has *Neulanuis*, *legatuis*, *diumpais* (*Nolanis*, *legatis*, *lamphis*), and in Umbrian the dat plur of *o-* and *a-* stems ends in *-eis*, *-es*, *-is* (later *-eir-*, *er-*, *ir*), and of *i-* stems in *-eis*, *-es* (perhaps on analogy of *a-* and *o-* stems [1]

Dative Dual —

Indo-European *-bhyāms*, lengthened from *-bhyăms* Sanskrit here drops the *-s*, and has **-bhyam.**

In Greek *-bhyāms* became something like *-φιων*, which became *-φιν* and finally *-ιν*, as in *o-* stems *ἵππο-ιν*=*ἵππο-φιν*, *χώρα-ιν*=*χωρα-φιν* All other stems follow the analogy of *o-* stems, and thus *-o-φιν*, *-οιν* is the usual termination throughout, e g. *γενέοιν* =*γενέσ-ο-φιν*, *πατέροιν* = *πατέρ-ο-φιν*, *εὐρέ-οιν* = *εὐρέϝ-ο-φιν* (stem *εὐρυ-* with stem vowel raised) The Homeric forms *τοῖϊν*, *βλεφάροιϊν*, etc. (from stems *το-* *βλεφαρο-*) appear to have an *ι* added to the stem, so that *τοῖϊν*=*το-ι-φιν*. The same form is found in some consonantal stems, e. g. *ποδοῖϊν* = *ποδ-ο-ι-φιν*,

---

[1] See Ferrar's 'Comparative Grammar,' p. 269.

Σειρήνοιϊν=*Σειρην-ο-ι-φιν*, where *ο*-, and afterwards *ι*-, have been added to the original stem, each under the influence of analogy

There is no trace of *-bhymâs* in Latin or any Italian dialect.

Instrumental Singular —

There appear to have been two Indo-European forms, (1) *-â*, (2) *-bhi* and it is suggested (Schleicher, Comp § 258) that these originally corresponded to the twofold meaning of (*a*) *comitative* ('I went *with* him'), (*b*) '*instrumental*' proper ('I cut it *with* a knife'), which are united in the Latin ablative case, and in our preposition 'with.'

(1) *-â* is found in Sanskrit (**vāc-ā**) and in Greek possibly in the adverbial forms *ἅμα* (Doric *ἁμᾶ*), *δίχα* (*διχᾶ*), *τάχα*, *φή* (Il i 144, xiv 499), *ἀλλαχῇ*, *πάντῃ* (Doric *παντᾶ*), *δή*=*dya*=*yâ* from pronominal stem *ya*, whence the locat. *jam* (see for 'parasitic *d*,' p 80)

(2) *-bhi*, which does not appear in Sanskrit, is in Greek *-φι*, a termination common in Homer, and not to be confused with the supposed earlier form of the dative dual *-ιν* mentioned above It is used as (*a*) comitative (*ἅμ' ἠοῖ φαινομένηφιν*), (*b*) instrumental proper (*ἶφι βίηφι*, Od. xxi 315, cp Il xvi 734), but also in a locative or ablative signification, by the easy transition from the notion of 'circumstances under which' or 'by which' to 'place at which' or 'from at which ' e. g. *ἐπ' ἐσχαρόφιν*, or with *ἀπό*, *ἐξ*, *ἐκ ποντόφιν*, 'from *on* the sea' (whence *-φιν* has sometimes been wrongly interpreted as a *genitive* termination)

Latin offers no trace of either *-â* or *-bhi*

Instrumental Plural —

Indo-European *-bhis*, i e *bhi* + *s*, of plural Sanskrit has **-bhis** except in *a*- stems, where **bh** disappears (**açvāis**) the Vedas however show **àçve-bhis**

In Greek the final *ς* is lost after *ν* (see p 68) and the form is therefore identical with the singular *-φιν*, e g *ναῦφιν*, Il. ii 794, *κοτυληδονόφιν*, Od. v. 433, *θεόφιν*, etc

Comparison of Adjectives :—

The declension of adjectives has been sufficiently explained under that of substantives: and there only remains the question of the formation of 'degrees of comparison' This is really part of the composition of words, i. e the formation of stems from roots · for comparative and superlative are formed by addition to stem of positive of particular suffixes, in no way different from other suffixes, and not confined to adjectives But the wide and general use of particular suffixes for this purpose, and the order usually observed in grammars, make it convenient to consider them at this stage

Comparative degree The supposed type of this stem in Indo-European is formed by a suffix *-yans* (=*yan-ta*) or *-tara* These may be derived either from (1) *verbal*, or (2) pronominal roots Those who derive from verbal roots connect *-yan* with Indo-European *yā*, 'to go,' whence Sanskrit **yā**, Greek *ἰέναι*, *-tara* with Indo-European *tar*, 'to cross over,' whence Latin *trans*, English *through* both roots thus signifying *progression*, and heightening the idea of the positive

But it seems better, without trying to attach so definite a meaning to the suffixes in question, to regard them as derived from pronominal roots and akin to certain other pronominal suffixes traceable in Indo-European languages Thus *-yans* may be connected with the common suffixes *-ant* (part. act in Sanskrit, Greek, Latin), *-vant* ('provided with anything,' Greek *Ϝεντ* in *ἰχθυό-Ϝεντ*, *χαρίεντ-*, etc , *-εις*, *-εσσα*, *-εν*), and *-mant* (*mana-*, *man-*) in *τλή-μων*, *ποί-μην*, *ani-mo*, *al-mo*, *certa-men*, *car-men* partic *-μενο-*, plur 2 per *-mini*, etc

-tara=*-ta-ra*, the latter of which elements sometimes expresses the idea of comparative as in Latin *sup-er-us*, etc.

(1) *-yan* (*-yans*) or *-ians*
Sanskrit **ī-yas** (base of comparative)
nom. sing **īyan(s)** masc, **īyas** neut.
acc. **īyānsam.**
instr. **īyas-ā.**

Greek *-ιον* (*-ιων* nom =*ιον-ς*, *ς* being lost and the vowel lengthened), before which final *-ο*, *-υ*, *-ρο*, of stem are dropped. e. g. *φῖλ-ιον* (*φιλο-*), *ἧδ-ιον* (*ἡδυ-*). *θᾶσσον*=*τάχ-ιον* (*ταχο-*), *μᾶσ-*

σον=*μάκ-ιον* (*μακρο-*), *αἴσχ-ιον* (*αἰσχ-ρο*), *μεῖζον*=*μέγιον* (*μέγας*), root *μεγ-*[1].

Latin -iōs, { *-ior*, *-or*,
{ *-ius*, *-us*.

-iōs is the oldest form, *n* being lost as in accus plur., but retained in adverbial *-iens* In adding *-ios* to vowel stems, the stem vowel is omitted, *prob-ior* (*prob-o-*), *sapient-ior*

In Classical Latin *-iōs* split into *-ior*, *-ios*, and the two forms then served to mark distinction of gender (*melior*, *melius*). The distinction between them was not originally very marked, and remains of Old Latin give e g *melios*, masc, and *prior*, *posterior*, neut[2]

-iōr=*-iōs* *ō* long in Old Latin (as in oblique cases), so Plaut Amphit I 3, 50 —

> 'Atque quanto nóx *lóngiōr* hacc próxuma'

Capt iv 2, 2 (*auctiōr*), and in neut *iūs*, Menaechmi, II 2, 52 —

> 'Proin tú ne quo abeas *lóngiūs* ab aedibus'

(2) *-tara*, Sanskrit **tara**, Greek *-τερο-ς*

In Latin it appears in e g *pos-teri*, *ce-teri*, *al-ter*, *neu-ter*, *u-ter*, *dex-ter*, *citra*, *ultra*, *frustra*, and possibly adverbs in *-ter* and *igi-tur*, etc (see however Appendix II, A)

In pure comparatives, only in composition with the other form *-iōs*, e g *ci-ter-ior*, *de-ter-ior*, etc, or *sin-is-tero*, *min-is-tero-*, etc. (cp Greek *λαλ-ίστερο-ς*).

[*mag-ister*, *min-ister*=the *greater*, the *less* person, cp English 'mayor,' 'major,' 'minor']

Comparison of Adjectives — Superlative

The elements of superlative formation of Indo-European languages are *-ta* and *-ma*, either separately or combined, or either of them doubled, or in combination with the comparative stem, as under the following heads.—

---

[1] On the production of these forms by assimilation, see above, pp 75, 6, and compare Schleicher, 'Comp' § 148 d, e (pp 224–226), and Peile, p 228.

[2] Priscian quotes 'senatus consultum *prior*,' 'bellum Punicum *posterior*,' and says, 'Vetustissimi etiam neutrum in *-or* finiebant, et erat eadem terminatio communis trium generum' In the appropriation of *-ior* to the masculine gender we perhaps see the result of analogy with substantives in *-or*, *honor*, *labor*, etc., which are usually masculine.

1 *-ta*; in numerals *πρῶτ-ος, ἕκτο-ς, sexto-*

2. *-ma*, *πρόμ-ος, primo-, summo-*, etc

3. *ta-ta*, the ordinary Greek superlative in *-τατο-ς*

4 *ta-ma*, in Latin *optumo-, dextumo-* (or without the superlative idea, *finitimo-, maritimo-*) With these Corssen classes the superlatives *facillimus, acerrimus, veterrimus,* which forms he holds=*facil-timo-, acer-timo-, veter-timo-*, *-timo* after *l*, *r* becoming first *-simo-*, and then by assimilation (p 74) *-limo-, -rimo* Thus *proximus=propic-tumus* (from an adjectival stem *propico-*), thence *propicsumus* and by contraction *proximus* *Maxumus=mag-tumus, mag-sumus* Another explanation however (see Roby's 'Latin Grammar,' Preface, p lxi) makes these forms=*-ios* or *-is* of comp + *-i* + *-mus* (*-ma*), e g *facillimus= facil-is-i-mus* under strong contraction. The difficulty here is in the insertion of *i* between *is* and *mus.* Both theories are possible Corssen's however follows a wider analogy, and (except in one or two cases) rests upon an easier contraction (see below, number 8, on *-issimus*)

5. *ma-ta*, Greek *πύματο-ς, ἑβδόματο-ς*

6 *yans-ta*, Greek superlative in *ιστο-, μέγιστο-ς*, etc

7 *yans-ma=ios-mo=is-mo=i-mo* in *minimo-, plurimo-*, etc where *i* is all that remains of the comparative suffix

8. *yans-ta-ma=is-tumo*, found in two words, *sollistumum* (*tripudium*), Cic de Div ii 34 72, explained as 'perfect' from *sollus=totus*, and *sinistumus*, superlative of *sinister*, as *dextumus* of *dexter*. On the analogy of these two forms, Corssen explains the regular Latin superlative in *-issimus=-is-tumus= -ios-tumus* (see above, number 4, on *facillimus*, etc). Here again another explanation is offered, that *-issimo=-is-imo*[1], the double *s* being due partly to the desire to indicate the length of the preceding syllable, partly to an attempt to preserve the sound of *s* sharp It seems doubtful, however, whether *s* is ever 'sharpened' to *ss* for merely phonetic reasons, except where a syllable is lost before it (as in *locassim*, etc); and of this moreover there is no example in noun-forms.

9. *tara-ma*, in *extremo-, postremo-*.

---

[1] See Roby's 'Latin Grammar,' vol. i. Preface, p. lxi

Paradigms of Noun Inflection in Sanskrit, Greek, and Latin (From Bopp, Schleicher, and Ferrar)

I (*a*). Consonant Stems —

	Sanskrit	Greek	Latin
(I) **Stem**	vac- (fem)	ὀπ- (fem)	vōc (fem)
Singular —			
Nom	vāk	ὄπ-ς	vōc-s (vox)
Accus.	vā́c-am	ὄπ-α	vōc-em
Gen	vāc ás	ὀπ-ός	vōc-is
Abl			voc-ē(d)
Loc	vāc í	ὀπ-ί (dat)	
Dat	vāc e (= ai)		voc-i
Instr	vāc á		
Voc	vak		
Dual —			
Nom Acc	vā́c ā, -āu	ὄπ-ε	
Gen Loc	vāc ós		
Dat Abl Instr	*vāg bhyám	ὀπ-ο-ῖν	
Plural —			
Nom	vā́c as	ὄπ-ες	vōc-ēs (voci-es)
Acc	vā́c-as	ὄπ ας	vōc-ēs
Gen	vāc ám	ὀπ-ῶν	vōc-um
Loc	vak shu	ὀπ-σί (dat)	
Dat Abl.	*vāg bhyas		voc-i-bus
Instr	*vāg bhís	(φιν)	

---

* c of stem assimilated to the media bh (see p 77) This c is the palatal modification of guttural k, which appears only in nom vak

Inflection of Consonant Stems.

	Sanskrit.	Greek	Latin
(2) **Stem**	bharant (masc n)	*φέροντ- (m n)	ferent (m f n), ferenti
Singular —			
Nom.	bháran, bharat (n)	φέρων (-οντ-ς)	feren(t)-s
Accus	bhárant-am, bhárat (n)	φέροντ-α	ferent-em
Gen	bharat-as	φέροντ-ος	ferent-is
Abl.			ferent-ĕ(d)
Loc	bharat-i	φέροντ-ι	
Dat	bharat-ē		ferent-i
Instr	bharat-ā		
Voc.	bharan, bharat (n)		
Dual —			
Nom Acc	bhárant-ā, -āu (m) bharant-ī (n)	φέροντ-ε	
Gen Loc	bhárat-os		
Dat Abl Instr	*bhárad-bhyām	φερόντ-ο-ιν	
Plural —			
Nom.	bharant-as, bhárant-i (n)	φέροντ-ες -α	ferent-es (-ies)
Acc.	bhárat-as (m), bhárant-i (n)	φέροντ-ας -α	ferent-es
Gen	bhárat-ām	φερόντων	ferent-ium (-um)
Loc	bhárat-su	φέροντ-σι (-ουσι)	
Dat Abl	*bhárad-bhyas		ferenti-bus
Instr	*bhárad-bhis	(-φιν)	
(3) **Stem**	*mánas-* (n) *dur-manas* (m f)	*μένος, μένεσ* (n) *δυσ-μενέσ* (m f)	*genus, genes* (n) *vetus, vetes* (m f) (*s* becomes *r*)
Singular —			
Nom.	mánas dur-manās (m f)	μένος δυσμενής	genus, arbōs (f) vetus
Acc.	mánas durmanas-am (m f)	μένος δυσμενέσ-α, -έα, -ῆ	genus veter-em (m f)

Greek forms a feminine by addition of suffix *ya* to this stem, *φέροντ-ya*, *φέρουσα*, which is declined as a fem *a*- stem. The same formation exists in Latin as a fem. noun *patien(t)s*, *patient-ia*.

*** Assimilation of *t* to *bh*.**

	Sanskrit	Greek	Latin
Gen	mánas-as	*μενέσ-ος, -εος, -ους*	gener-is
Abl.			gener-ē(d)
Loc.	mánas-i	*μένεσ-ι, μένει*	(iuri ?)
Dat	mánas-ē (= ai)		gener-ī
Instr	manas-ā	(*ὄχεσ-φι* = bhi)	
Voc	manas	*μένος* *δυσμενές* (m f)	genus
Dual —			
Nom Acc	mánas-ī (n) durmanas-ā, -āu (m f)	(*μένεσ-ε*) *μένη* *δυσμενέσ-ε*, *δυσμενῆ*	
Gen Loc	mánas-ōs		
Dat Abl Instr	manō-bhyām	*μενέσο-ιν, -εοιν, -οῖν*	
Plural —			
Nom.	mánāms-i (n) durmanas-as (m f)	*μένεσ-α, -εα, -η* *δυσμενέσ-ες* (m f *-εες, -εῖς*	gener-a (n) veter-ēs (m f)
Acc.	mánāms-i dur-manas-as (m f)	*μένεσ-α, μένη* *δυσμενέσ-ας* (m f) *-εας, -εῖς*	gener-a (n) veter-es (m f)
Gen	mánas-ām	*μενέσ-ων, -έων, -ῶν*	gener-um
Loc	manas-su	*μένεσ-σι, μένεσι*	
Dat Abl	mánō-bhyas		gener-ibus
Instr	manō-bhis	(*μένεσ-φι*)	

N B—Masc and fem forms are only given where they differ from those of the neuter stem

I (*b*) Stems in *i*- —

	Sanskrit	Greek	Latin
Stem	ávi (m f) vā́ri (n)	*πολι*- (fem) *ἰδρι*- (adj)	*ovi* *mari*- (n)
Singular —			
Nom	ávi-s vā́ri (n)	*πόλι-ς* *ἴδρι* (n)	ovi-s mare (n)
Accus	ávi-m vā́ri	*πόλι-ν* *ἴδρι*	ove m mare
Gen.	ávēs vā́ri-n as ávy-âs (f)	*πόλι-ος*, *πόλε-ως* *πόλη-ος* = *πόλεy-ος* (*ως*, adv)	ovis
Abl.			ovē(d) mari-(d)
Loc.	ávāu vā́ri-n-i ávyām (f)	*πόλε-ι*, *πόλει* *πόλη-ι*	
Dat	ávay-ē vā́ri-n-ē ávy-āi (f)		ovī
Instr	ávi-n-ā vā́ri-n-ā ávy-ā (f)		
Dual —			
Nom Acc	ávī vā́ri-n-ī	*πόλι-ε*, *πόλεε*	
Gen Loc	âvy-ōs vā́ri-n ōs		
Dat Abl Instr	avi-bhyām	(*πολί ο-ιν*) *πολεοῖν*	
Plural —			
Nom.	ávay-as vā́ri-n-i	*πόλη-ες* = *πόλεy-ες* *πόλι-ες*, *πόλεις* *ἴδρι-α* (n)	ovēs mari-a (ovi-es)
Acc	avī-n (m) vā́ri-n-i ávī s (f)	*πόλη-ας* *ἴδρι-α* *πόλεις*	ovēs mari-a
Gen.	avī n-ām	*πολί-ων*, *πόλεων*	ovi-um
Loc.	ávi-shu	*πόλισι*, *πολέ-σι* *πολί-ε-σσι*	
Dat Abl	ávi-bhyas		ovi-bus
Instr	ávi-bhis		

N B —Neuter forms are only given where they differ from those of masc and fem stems

I (*c*) Diphthongal Stems :—

	Sanskrit		Greek		Latin[1]	
Stem	1 nāu		1 *ναῦ-*		1.	(navi-)
	2 gau-		2 *βου-*		2 bou	(bov i)
Singular —						
Nom	nāu-s	gau-s	*ναῦ-ς*	*βοῦ-ς*	navi-s	bō-s (bous)
Acc.	náv-am	gā-m	*νῆϜ-α* *ναῦ-ν*	*βοῦ-ν*	nav-em	bov-em
Gen.	nāv-as	gō-s	*νηϜ-ός* *νε-ώς*	*βοϜ-ός*	navi-s	bov-is
Abl.	nāv-ás	gos			navē(d)	bovē(d)
Loc	nāv-i	gav-i	*νηϜ-ί*	*βοϜ-ί*		
Dat	nāv ḗ	gav-ē			nav-ī	bov-i
Instr	nāv-ā	gav-ā	*ναῦ-φι*			
Voc.	(as nom)		*ναῦ*	*βοῦ*	(as nom)	
Dual —						
Nom Acc	náv-ā, -āu	gáv-ā, -āu	*νῆϜ-ε*	*βόϜ-ε*		
Gen Loc	nāv-ṓs	gáv-ōs				
Dat Abl Instr	nāu-bhyám	go-bhyām	*νηϜο-ῖν* *νε-οῖν*	*βόϜο-ῖν*		
Plural —						
Nom	náv-as	gáv-as	*νῆϜ-ες*	*βόϜ-ες*	navēs	bovēs (ies)
Acc	náv-as	gáv-as gās	*νῆϜ-ας* *ναῦ-ς*	*βόϜ-ας* *βοῦ-ς*	naves	boves
Gen.	nāv-ám	gáv-ām	*νηϜ-ῶν* *νε-ῶν*	*βοϜ-ῶν*	navi-um	bo-um = bov-om
Loc.	nāu-shu	gṓ-shu	*νηυ-σί* *ναυ-σί* *νήϜε-σσι*	 *βου-σί* *βόϜε-σσι*		
Dat Abl	nāu-bhyás	gṓ-bhyas			navi-bus	bō-bus bū-bus
Instr.	nāu-bhís	gṓ-bhis	*ναῦ-φιν*			

---

[1] The disappearance of diphthongs in Latin (see p 56) leaves but little trace of diphthongal stems *navis* is throughout an *i*- stem. but the declension of *bos* retains traces of a stem *bou-* or *bov-* corresponding to Greek *βου-*, *βοϜ-*

II (*a*) Vowel Stems (masc. and neut) ·—

	Sanskrit	Greek	Latin
Stem	áçva- (m) yugá (n.)	ἱππο- (m) ζυγο- (n)	equo (m) jugo (n)
Singular —			
Nom	áçva-s yugá-m	ἵππο-ς ζυγό-ν	equo-s (equus) jugu m (-om)
Acc	açva m yugá-m	ἵππο-ν ζυγό-ν	equo-m jugu-m
Gen	áçva-sya	ἵππο (σ)ιο	equo-is
Abl	áçvā-t	ἵππο-ο, ἵππου	equo-i, equī equō(d)
Loc	áçvē (açva-i)	(οἴκο-ι, οἴκοι)	(domi = domo-i ?)
Dat	áçvā-y-a	ἵππο-οι, ἵππῳ	equōi = equŏ-oi equō
Instr	áçvēn-a (Vedic áçvā)	ποντό-φι	
Voc	açva	ἵππε (= ἱππο-) ζυγό-ν	eque (equo) jugu m
Dual —			
Nom Acc	áçvā, áçvāu	ἵππο-ε, ἵππω	
Gen Loc	açva y ōs		
Dat Abl Instr	áçva bhyām	ἵππο-ιν	
Plural —			
Nom	áçvā s (Vedic áçvâ sas) yugán i (n) (Vedic yugá)	ἵππο-ι ζυγά (n)	(equo-es, equeis) equi jug-a (m)
Acc	áçvān (= açvân s) yugán i	ἵππους = ἵππον ς ζυγά	equōs = equom-s juga
Gen	áçvā n ām	ἱππό ων, ἵππων	equō-rum equūm = equo-ōm
Loc	áçvē shu	ἵπποι-σι, ἵπποι-ς	(equo-is) equis
Dat Abl	áçvē bhyas		
Instr	áçva is (Vedic áçve bhis)	(θεό-φιν)	

II (*b*). Vowel Stems (feminine *ā*-)

	Sanskrit.	Greek	Latin
Stem	açvā	*χώρα-*	*equa-*
Singular —			
Nom.	áçvī	*χώρα*	equa
Accus	áçvā m	*χώρα-ν*	equa-m
Gen	áçvā y as	*χώρα-ς*	(equa-is, equās)
			equai, equae
Abl			equā(d)
Loc	áçva y ām	*χαμα-ί*	(Romae=Roma-i?)
Dat	áçva y ai		equāi = equa-ai
	Ved áçvā-i (a ai)	*χώρᾳ* (*χώρα-αι*)	equae
Instr	áçva y ā		
	Ved áçvā	*βίη-φι*	
Dual —			
Nom Acc	áçvē	*χώρᾱ*	
Gen. Loc.	áçva y ōs		
Dat Abl Instr	áçvā bhyām	*χώρα-ιν*	
Plural —			
Nom	áçvī s	*χῶραι*	(equa-es, equās,
	(Ved áçva-sas)		equais, equai)
			equae
Acc	áçvā-s	*χώρᾱς* (*-αν-ς*)	equās (-am s)
Gen.	áçva n ām		
	Ved áçvām	*χωρῶν* (*α-ων*)	equa rum
Loc	áçvā su	*χώραι σι*, *χωραῖ-ς*	(equa-is) equis
Dat Abl	áçvā bhyas		equa bus
Instr	áçvā bhis	(*φιν*)	

CHAPTER VII

INFLECTION OF PRONOUNS.

THE Pronouns exhibit certain irregularities of inflection, which make it necessary to consider them separately from nouns In many cases they have undergone such changes that the forms admit of only conjectural explanation and the variety of pronominal roots employed makes it difficult, if not impossible, to reduce them to any uniform scheme The Pronouns of the 1st and 2nd person, and the reflexive pronoun (Indo-European *ma-*, *tva-*, *sva-*) have no distinction of gender a fact which is accounted for by their antiquity, if (as appears likely) they are the oldest extant elements in language, developed previously to the introduction of distinction of gender The presence or absence of this distinction divides the pronouns roughly into two main heads, viz (1) Pronouns without Gender (as above), and (2) Pronouns with Gender

(1) Pronouns without Gender (1st and 2nd Personal, and Reflexive)

The originals of these three pronouns, *ma*, *tva*, *sva*, are traceable in the oblique cases, and in Verb Inflections of person (*-mi*, *-si*, *-ti*, see below, ch viii), but all speculation as to the derivation of meaning of these elements is fruitless. The declension of these three pronouns has many points of similarity, and they might without difficulty be considered together but it seems best upon the whole to take them separately.

1st Personal Pronoun (*ma*)

Nom Sing. Here we are met at once by a different form; viz. Sanskrit **ahám**, Greek *ἐγών* (Doric), *ἔγωνγα*, *ἐγώ* (Attic), *ἰών*, *ἰώνγα, ἰώγα, ἰώνει* (Boeotian), *ἐγώνη* (Laconian and Tarentine); Latin *egŏ*, later *egō*[1]. **Ahám** and *ἐγών* probably arise from a common form *agham*

Accus Sing Sanskrit **mā-m, mā**, Greek *μέ* or *ἐμέ* (*ε* 'prosthetic' or auxiliary, see p 83), *ἐμεί* Doric, Latin *mē* Quintilian (i 5 20) speaks of *mehe* and in Old Latin *med, ted, sed* occur, probably formed on analogy of the ablative in *-d* The quantity of *mē* as compared with *μέ* is variously explained as arising from confusion with the ablat *mē* (Corssen[2]), as a consequence of its being monosyllable (Schleicher, § 265), or as a compensation for the loss of *-m*, i e *mē=mĕ-m, mĭ-m* (stem *mi-* as in *mi-hi*)

Gen Sing Sanskrit **máma** (stem reduplicated, case ending lost), Greek *ἐμεῖο* (Epic)=*ἐμε-σyo* (as *-οιο* of nouns, p 119), *ἐμείω* (Doric), then by loss of *ι* (*y*) *ἐμέο*, and by contraction *ἐμοῦ, μοῦ* (Attic), *ἐμεῦ, μεῦ* (Doric) *ἐμέ-θεν* (Homer and Eurip Hel 177) is formed by the suffix *-θεν* so *μεθεν* quoted by Ahrens from Sophron (circ 450 B C). The forms *ἐμέος, ἐμοῦς, ἐμεῦς* (Doric), *ἐμείως, ἐμῶς* (Syracusan), are usually explained as addition of gen sign *-ς* to the old genitive In Latin *mei* is probably a locative, or borrowed from the possessive *meus* An old genitive *mis* is said to have been used by Ennius.

Ablat Sing Sanskrit **ma-t**, Latin *mē-d* (as *tē-d, sē-d*), a form restored by Ritschl to many passages in Plautus, e g Trin ii, i, 36, Amph ii 2, 178, Most ii i, 18

Locat Sing Sanskrit **máyi**, Greek dat *μοί* (*μο-+ι*), and perhaps Latin gen sing *mei*

Dat. Sing Sanskrit **má-hyam**, Greek *ἐμίν* (Doric)=*ἐμέ-φιν* =(*e*)*ma-bhyam*, cp p 129, a form *ἐμίνη* (Tarentine) is also quoted Latin *mi-hei, mihī* (afterwards *mihĭ*) is perhaps for *mif-ei*, *f* representing an original *bh*, which becomes *b* in *tibei, sibei*

Instr Sing No trace in Greek or Latin

Nom Plur. The Indo-European stem of this case was perhaps formed by addition of the pronominal element *-sma* (*sa-ma*) to the demonstrative stems *ma-*, *a-*, *va-*, i e. *ma-sma-*, *a-sma*, *va-sma* The first would account for Lithuanian *mẽs*, the second for (Vedic) Sanskrit **asmé**, the third for Sanskrit **vayám**, Gothic *veis*, English *we.* Greek ἡμεῖς[1], ἄμμες (Aeolic), ἀμές (Doric), arise from stem *asma*, *asmi*=ἀμμι- (by assimilation, p 74) or ἡμι- by loss of *s* and compensatory lengthening of *a* to η (cp ἐσ-μί, εἰμί)

---

[1] See Wordsworth, 'Fragments,' etc. Introd xli 4

[2] 'Kritische Beitrage zur Lateinischen Formenlehre,' p. 528.

Latin *nōs* (*enōs*, Carm Arval) seems connected with stem *no*, which occurs in Greek νῶι, Sanskrit dual *nāu*, and accus gen dat plur *nā̆s* It may be that *nōs* is an accus. used as nom, and originally *nō̆s* (Sanskrit **nā̆s**), but strengthened from analogy of the common accus. plur in *-ōs* (*equōs*) Bopp, however, considers that *nos-* is the stem, found e g in *nos-ter*, and connects both it and Sanskrit **nā̆s** with *sma*, whence he derives *-met* in *egomet*, etc, and *immo*=*i-sma*

Accus Plur Sanskrit **asmān**=**asman-s**, Greek ἡμέας, ἄμμε (Aeolic), from same stem as nom. plur Latin *nos* as nom plur.

Gen Plur Sanskrit **asmákam** (an adjective in acc sing neut), **nas** Greek ἀμμέων (Aeolic), ἡμέων (Ionic), ἡμῶν, ἡμείων (Epic) from stem ἀμμε-, ἡμι-, Latin *nostrum*=*nostro-um*, gen plur of possessive stem *nostro-* *Nostro-rum* is also found in Plautus.

Abl. Plur. Sanskrit **asmá-t**, Latin *no-bis* (as dat)

Loc Plur Sanskrit **asmá-su**, Greek (Aeolic) ἀμμέ-σιν

Dat Plur Sanskrit **asmá-bhyam** or **nas**, Greek ἡμῖν, ἄμμιν, where ιν=ι-φιν (see above, p. 130), Latin *nō-bis* (=*nos-bis*, if *nos-* be stem)

Dual Greek nom acc. νῶι, νώ, νῶε (Boeotian), gen dat νῶϊν, νῷν, are forms from a stem νω-=Sanskrit **nāu**, which is used (without inflection) for nom gen and dat dual In form this **nāu** is a regular nom acc. dual from stem *na-*, as **áçvāu** from **áçva-**.

2nd Personal Pronoun (*tva*).

---

[1] An Ionic form ἡμέες, sometimes found in MSS of Herodotus, seems to have had no existence.

Nom Sing Sanskrit **tvam** (perhaps=*ta*+*va*+*ma*), Greek σύ, τύ (Doric), with Boeotian forms τούν or τύν-η, where ν probably=-**m** of **tvam**, Latin *tu* In τύ, *tu*, the *u* represents *v* or ϝ

Acc Sing Sanskrit **tvā-m** or **tvā**, Greek σέ, τέ (Doric) (=σϝέ, τϝε), τίν (Boeotian), Latin *tē*=*tve-m*, stem *tvi-* (for quantity see above on 1st pers pron), Umbrian has *tiom*, which either =*tuom*, =*tvam*, or (Corssen) =*tvio-m* from stem *tvi-* lengthened by *a* (cp *e-u-m*=*i-o-m* from stem *i-*)

Gen Sing Sanskrit **táva**, Greek τεοῖο (Epic),=τεϝο-σyο=*tava-sya* (see p 118), *σεῖο*=*tva-sya*, *then σέο*, *σεῦ* (Ionic), and σοῦ, Doric τεοῦς, τεῦς, τίως, in which -ς is added to the old form (cp on 1st pers pron)

Abl Sing Sanskrit **tva-t**, Latin *tē* (old Latin *tēd*)

Dat Sing Sanskrit **tu-bhyam**, Latin *ti-bi*, Greek τεΐν (Epic)

Nom Plur The Sanskrit forms **yushmé** (Vedic nom) and **yushmá-n** (accus) point to *tva-sma* as the Indo-European form The Greek and Latin forms (ὑμεῖς, ὔμμες, ὑμέ, *vos*) are parallel to those of 1st pers pron, and so throughout the plural of 2nd pers

Dual. The Greek forms σφῶι, σφώ (nom acc), and σφῶϊν, σφῷν (gen dat), retain in φ the *v* sound of *tva* σφ=*tv* Latin has retained the *v* in *tui* and the possessive *tuus* (=*tvas*)

Reflexive Pronoun (*sva*)

The stem **sva-** appears in Sanskrit only in compounds, e.g **sva-yam** (self), **sva-tas** (by oneself), etc [1] but it is used to form the possessive **sva-s**=Latin *suus*=Greek σϝός, which appears (by loss of ϝ and change of σ, see p 66) as ὅς the possessive pronoun in Homer. There is one distinction of gender in this pronoun, viz Greek nom acc plur neut. σφέα

Nom Sing, wanting in Greek and Latin.

Accus Sing Greek ἕ, Aeolic ϝέ=σϝέ, Epic ἑέ=σεϝέ (see pp 66, 68) σϝέ=*sva*, with inflection lost. The forms μίν (Epic), νίν (Doric), are perhaps reduplicated accusatives of stem

[1] See Curtius' 'Elucidations,' p. 85.

ι- (ἰμιμ) cp Latin *sese* Latin *sē=svē=svi-m* Oscan *siom* either=*sva-m* or *svi-o-m* (see above on 2nd pers) Old Latin *sed*, see on *med*, *ted* accus

Gen Sing. εἷο (Epic)=σϝε-σyo, ἕο (Ionic), οὗ (Attic), εὗ, ἑοῦ (Doric), ἑοῦς (Boeotian), (see above on ἐμοῦς, τεοῦς) In all these forms the aspirate=σ (p 66) and ϝ has disappeared

Abl Sing *sē*, original *sēd=sei-d* from stem *si* (in *si bi*) =*svi*

Loc Sing οἷ, Aeolic ϝοῖ=σϝο-ῐ, Latin *sui* (see on *mei*, *tui*, p 143).

Dat Sing Boeotian ἑῖν, Doric ῖν (ἑῖν)=ἑφίν, Latin *si-bi*, Oscan *si-fei*, Umbrian *si-be* and *se-so* (Tab Eugub [1]), which is perhaps a reduplicated locative=*se-so-i* (?), or a genitive form =*sva-sya* but these are only conjectures to explain a very obscure form

In the plural Greek retains the stem but little altered (σφι-=*sva*), and has a very complete set of forms while in Latin the plural forms are identical with the singular Thus in Greek,—

Nom Plur σφεῖς=σφέ-ες

Accus Plur σφᾶς, σφέ-ας (Ionic), σφεί-ας (stem raised), Doric σφέ (inflection lost), Aeolic ἄ-σφε (α 'prosthetic' or 'auxiliary,' see above, p 83).

Gen Plur σφῶν, σφέ-ων (Ionic), σφείων (Aeolic)

Loc Plur σφί-σι.

In Greek *Dual* the stem σφω-=*svā* σφω-έ then has the dual nom acc. inflection as well as the stem vowel lengthened, σφωῖν (gen dat)

---

[1] Wordsworth's 'Fragments,' Introd xii 9

I PRONOMINAL DECLENSION WITHOUT GENDER.

(i) *Pronoun of the 1st Person (ma-)* —

	Sanskrit	Greek	Latin
Singular —			
Nom	ahám	ἐγών, ἐγώ	ego
Accus	mā-m, mā	ε-μέ, μέ	mē
Gen	mama	ἐμεῖο (ἐμε-σyo)	(mei ?)
		ἐμοῦ, μοῦ	
		ἐμοῦ-ς	
Abl.	ma-t		mē d
Loc	ma yi	εμο-ί, μο-ί	mei (unless gen)
Dat	má-hyam	εμίν (εμε-φιν)	mi-hei, mihi
Instr	má-yā		
Dual —			
Nom	āvā́m	νῶι, νώ	
Acc	āvā́m, nāu		
Gen Loc	āvá-yōs		
Dat Abl	āvā́-bhyām	νῶ-ιν, νῷν	
Instr	(nāu)		
Plural —			
Nom	vayám	ἄμμες (ἀσμι-)	nōs (? nŏs)
	asmé (Ved)	ἡμέ-ες (ἡμι-)	(enōs, Carm Arv)
		ἡμεῖς	
Acc	asmā́n	ἄμμε	
	nas	ἥμεας, ἡμᾶς	nōs
Gen	asmā́k-am (adj)		nostrum (nostro-um)
	nas	ἡμεί-ων, ἡμέ-ων	nostri
		ἡμῶν	
Abl	asmá-t		nō-bis (dat.)
Loc	asmā́-su		
Dat	asmá-bhyam	ἄμμιν (ι-φιν)	nō-bis
	nas	ἡμῖν	
Instr	asmā́-bhis		

(ii.) *Pronoun of the 2nd Person (tva-)* —

	Sanskrit	Greek	Latin
Singular —			
Nom	tva-m	*τύ, σύ*	tu
Accus.	tvā-m, tvā	*τέ, σέ (=τϝε)*	te = tve-m
Gen	tava	*τεοῖο = (τεϝο-σyo)* *σεῖο, σεο* *σοῦ, σευ* *τεοῦ-ς*	(tui ?)
Abl	tva-t		tē-d (= tei-d)
Loc	tvá-yi	*σο ί* (tv ι ι)	tui (gen)
Dat	tu-bhyam	*τείν (ι-φιν)*	ti-bei, tibi
Instr	tvá-yā		
Dual —			
Nom Acc	yuvám yuvám, vām	*σφῶι, σφώ*	
Gen Loc	yuva-yōs		
Dat Abl Instr	yuvá-bhyām vām	*σφῶ-ιν (-ι-φιν)* *σφῷν*	
Plural.—			
Nom.	yū-yám yushmé (Ved)	*ὔμμες* *ὑμέες, ὑμεῖς*	vōs
Acc	yushmá-n vas	*ὔμμε* *ὑμέας, ὑμεῖς*	vōs
Gen.	(yushmáka-m,adj) vas	*ὑμείων, ὑμέων* *ὑμῶν*	vostrum vostri
Abl	yushmá-t		vō-bis (dat)
Loc	yushmá-su		
Dat	yushmá-bhyam vas	*ὔμμι (ι-φιν)* *ὑμῖν*	vo-bis
Instr	yushmá-bhis		

(iii) *Reflexive Pronoun (sva-)*:—

	Greek	Latin
Singular —		
Nom		
Accus	ἕ, ϝε, ἑέ = σεϝε	sē (= svi-m)
	μιν, νιν	siom (Osc.)
Gen	εἷο = σϝε-σyo	(sui ?)
	ἕο, οὗ, εὗ, ἑοῦ	
	ἑοῦ-ς	
Abl.		sē-d, sē
Loc	ἑοῖ, οἷ	sui
	(ϝοι = σϝοι)	
Dat	ἑίν, ἵν = ε-φιν	sibei, sibi
		Osc. si-fei
Dual —		
Nom Acc	σφω-έ	
Dat Abl Instr	σφω-ίν	
Plural —		
Nom	σφεῖς (σφέ-ες) } σφέ-α (neut.)	
Accus	σφέ-ας, σφείας }	}
	σφᾰ́ς (Epic), σφέ	}
	ἄ-σφε	} as in sing.
Gen	σφέων, σφείων	}
	σφῶν	
Loc	σφί-σι	
Dat	σφί(ν) (ι-φιν)	as in sing.

(2) Pronouns with Gender.

The declension of these is rather complex, especially in Latin, here a great variety of pronominal stems is found; and an amination of all their forms belongs to the special grammar each language. The following tables give the declension of e Indo-European demonstrative stem *ta-* in Sanskrit, Greek, d Latin; which, compared with the declension of nouns already ven (above, ch. vi), will serve for the general illustration of is class of pronouns.

Pronominal Stem *ta*-.

I Masc and Neut —

	Sanskrit	Greek	Latin
Stem	ta-	*το-*	is-to- (i + sa + ta)
Singular —			
Nom	sa, ta-d	*ὁ(ς), τό*	istu-s, is-te, istu-d
Acc	ta-m, ta-d	*τό-ν, τό*	istu-m, istu-d
Gen	tá-sya	*το-ῖο, τοῦ*	istīus (isto-i-os)
Abl	tá-smâ-t	[*τως = τω-τ*]	isto-d
Loc	tá-sm-in	[*οἶ = ὁ-ι*] }	isti ? { =isto-i (loc) as humi, quoi
Dat	tá-smâi	*τῷ = το-οι* }	=isto-ei (dat) as quoiei
Instr	tēṇ-a		
Dual —			
Nom Acc	tâu (tâ), tê	*τώ*	
Dat Abl	tá-bhyâm	*το-ῖν*	
Gen Loc	tá-y-ôs		
Plural —			
Nom	tē, tā-n-i	*τοί, οἱ τά*	istī, ista, ista-e-c (eis, his, ques)
Acc	tā-n, tā-n-i	*τόνς, τούς, τά*	istō-s, ista
Gen	té-sham	*τῶν*	istō-rum
Loc	té shu	*τοῖ-σι, τοῖς*	istis (queis)
Dat Abl	té bhyas		(qui-bus, hī-bus, hoi-bus)
Instr	tāis		

II Feminine —

	Sanskrit	Greek	Latin
Stem	ta-	*τα-*	ta-is-ta
Singular —			
Nom	sā	*ἡ*	is-ta, qua-i (quae)
Acc.	tā-m	*τή-ν*	is-ta-m
Gen	tá-sy-ās	*τῆ-ς*	is-tīus
Abl.			is-tā(-d)
Loc.	tá-sy-ām	}	is-ti (as above)
Dat.	tá-sy-āi	*τῇ* }	
Instr.	tayâ	(*ἧφι*)	

	Sanskrit	Greek	Latin
Dual —			
Nom Acc	te	*τά*	
Dat Abl	tā́-bhyām	*τα-ῖν*	
Gen Loc	tá-y-ôs		
Plural —			
Nom	tā-s	*ταί*	is-tae
Acc	tā-s	*τά-ς*	is-tī-s
Gen	tā́-sām	*τά-ων, τῶν*	is-tā-rum
Loc	tī-su	*τῆ-σι, ταῖ-ς*	is-tīs
Dat Abl	tī́-bhyas		
Instr	tā́-bhis		

N B Gen sing -īus } show increase of { isto-i-us
Nom fem and neut istaec, quae } stem by i thus { ista-i-ce, qua-i.

Comparing these forms with those of the nominal declension it will be seen that the nom sing termination *-s* is omitted from Sanskrit **sa** (masc), being in fact (see p 110) a mere repetition of **sa** Thus beside Greek *ὅς* (Epic as a demonstrative pronoun) *=sa-s*, we have the later form *ὁ=sa*

In Latin the *-s* is lost in *ille, ipse, istĕ* (where final stem vowel sinks to *ĕ*), *qui* (*=quo-i-s*), and hic (*=ho-i-ce*), but is retained in the old forms *ipsus, istus, ollus*, and regularly in *quis* (*=quŏ-s*), *is*, *alius*, etc

The nom acc. termination of neut sing in *-d* is characteristic of this class of pronouns Sanskrit and Latin have retained the *d*, which Greek has lost Zend has *d* in *tad* and Gothic *thata*, whence our *that* Bopp, Schleicher, Curtius and others give **tat** as the Sanskrit neut sing ; Bopp explaining **ta-t** as *=ta+ta*, a repetition of the pronominal element (like *sas=sa+sa*), and illustrating the change to Latin *d* by the old ablatives *gnaivod*, etc., cp with Sanskrit abl. in **t** But here also (see above, p 124) *-d* is probably the earlier form of the termination And if **tat** were the true form in Sanskrit, phonetic analogy would (it is said) require in Latin *istut*, in Gothic *tha-tha.* It is probable therefore that Latin *-d* is the original form, and not a modification of *t* Greek neut sing. nom having thus lost the final τ (δ) ends in *o* but in other respects the pronominal is the same as the nominal declension of *o*- and *a*- stems

In Latin also the *a* of stem *ta* is represented by *o* (masc and neut.) and *a* (fem), *quis*, *i-s*, *ali-s* being exceptions But on the other hand there are certain peculiarities which distinguish the Latin pronominal declension more markedly than the Greek from that of noun stems in *a-*, *o-*, e g —

(*a*) Gen sing. formed by addition of *-os* or *-us* (Indo-European *-as*, see p 118) to the stem lengthened by *i* thus *istius*=*is-to-i-os*, *huius*=*ho-i-os*, *cuius*=*quo-i-os*. This *-os*, *-us* =*-is* of consonantal declension

(*b*) *Locative singular* in *-i* used as dat, e g *is-ti*=*is-to-i* (see p 126). The form *quoiei*, however, is apparently a true dative, from the stem increased by *i* (*quo-i-ei*), the locative form *quo-i* (*cui*) being the more usual in classical times

(*c*) It has both locative plural (*is-tis*, see p 127) and dative plural (*qui bus*)

(*d*) The neuter termination *-d* (see above)

(*e.*) Increase of the stem by *i* This *i* is probably parallel to the Greek suffix ι, found with pronouns especially, but *after* the case-suffix, e g *οὑτοσί*, *τοδ-ί*, *οὑτοιί*, etc Its place in Latin is between the stem and the case-suffix, and it is not carried through all the forms It occurs always in gen sing. *i-us*= *o-i-os*, often in nom fem sing (*qua-i*, *ha-i-c*, etc) and in neut plurals which are similar in form, in masc and fem plurals in *-ī* and *-æ*=*o-i*, *a-i*, as in nominal declension of *o*- and *a*- stems (p 113), and in such dat forms as *quo-i-ei*, *e-i-ei*

The declension of Latin pronouns is treated very fully in Wordsworth's 'Fragments and Specimens of Early Latin' (Introd. ch xiii. pp 91–112) I give here the main results of Mr Wordsworth's discussion, referring the reader to his work for details.

The chief pronominal stems in Latin are *ho-*, *to-*, *so-*, *co-* (*quo-*), *illo-*, *i-* or *eo-*. These are employed in the formation of pronouns in various ways, viz. —

(1) Simply, as *quo-d*, *ollu-s*, *i-s*

(2) Reduplicated or compounded, as in *is-to*, *i-p-so*, *quis-quis*

(3) Increased by *i*, as *quī* (*quo-i*), *eīei* (see above)

(4) Increased by *i* and compounded, as *ho-i-ce* (*hīc*), *is-to-i-c* (*istic*)

These are divisible into three classes, according to simplicity of declension viz —

(i) *Ollo-*, *isto-*, *ipso-*, *alio-*, etc.

(ii) *Ho-*, *quo-*, *i-* or *eo-*

(iii) *So-*, *to-*, etc, defective and enclitic stems

The following peculiar or archaic forms may be noted under each of these classes —

(i) *Ollus* (=*ille*) found in Ennius and old inscriptions, and surviving in *olim*, which preserves the oldest form with one *l* In Lucretius and Virgil it is an intentional archaism

Istus, *ipsus* are found in Plautus, and even in Terence (Hec iii 5 5) The element *p* in *i-p-so* is the same which appears (as *p* or *pe*) in *rea-p-se*, *quis-p-iam*, *nem-pe*, *pro-pe*

Alis, *alid* are late contractions of *alius*, *aliud* *alis* is fem in Catull lxvi 28 *alid* is frequent in Lucr, who does not use *alis*

The locative *is-to-i*, *isti* (see above, p 126) is strictly locative n the adverbs *illi-c*, *istī-c* A few examples of its use as genitive (perhaps from analogy of noun stems in *o-*) are given g Ter And iii 5 2, *nulli consili*, Plaut Trin ii 2. 37, *oloris ulli capiendi*, ib v 38, *isti modi* In each of these ases an ordinary genitive in *-i* is close at hand to suggest the nalogy. Terence has *alterae* and Plautus *istae* for dat. fem

A locative formation in *-im* or *-in* (cp Sanskrit ta-sm-in) ccurs in the adverbs *olim*, *illin-c*, *istinc*, *hin-c*, etc, cp *long-in-uus*, *prop-in-quus*

The plural is declined like ordinary *o-* stems

(ii) The stems *ho-* and *quo-* are further increased by *i*, *ho-*aving generally the enclitic *c*, or *ce* appended (a remnant of e pronominal stem *co-*) The increase takes place in sing. om *hīc* (*ho-i-c*), gen. *huius* (*ho-i-os*), loc. *hīc* (*ho-i-c*), and plur.

nom. *hi* (*ho-i*), *ha-i*, dat and abl *hībus* (*ho-i-bus*, for examples see Wordsworth, p 107)

The stem *quo-* (relative), when used as an interrogative pronoun, has a special inflection for nom. with the case suffix *s*, the stem vowel *o* being weakened to *i* (*qui-s*, *qui-d*) The same form is used indefinitely in *ali-quis*, *si quis*, *ne quis*, but then nom fem sing and neut plur. are not increased by *i*. e.g. *aliqua*, *si qua*.

In the declension of *is*, the stem *i* is sometimes increased by *i* to *ei* (nom *e-i-s*, gen *e-i-us*, dat *e-i-ei*, nom plur *i-i*, *e-i-s*), sometimes turned into an *o-* or *a-* stem (*eo-m*, *ea-m*, etc)

The following peculiar forms may be noticed

Nom Sing *ei-s* (raised form of *i-s*) is found on some inscriptions, and perhaps *adeo* represents a raised form of neut *id* (*ad*, *eod*) but this is at best doubtful

Hīc (*ho-i-c*) is sometimes shortened to *hĭc* (Virg Aen iv 22), but not often *hōc* (*hod-ce*) never

Acc Sing *im*, *em* in quotations from old laws[1] point to a time before the stem *i* was raised to *eo-*

Huc (adv) is originally *hoc*, 'to this place,' as in Aen viii 423, Ter. Eun. iii 2. 48, and frequently in Plautus

Honc (Ep Scip. Appendix I 1 2) and *quo-m* (S C de Bacch) are old Latin forms *Quom* is the adverb *quum* or *cum*, cp *quon-dam* and *quam*, *quanquam*, *quod* are all adverbial accusatives. (See Appendix II. A)

Gen Sing the suffixed *i* generally becomes consonantal, and in old poets *huius*, *cuius*, *eius* are often monosyllables

Locat Sing. *heic* or *hīc* (adv) is locative =*ho-i-c*, and so perhaps are *quî*, *qui-ne*, and *qui-ppe* (sometimes explained as ablat) The form *quo-i* is found in Plautus[2] in the phrase *quoimodi*, apparently gen (cp *istimodi* above, p 153), and *cuimodi* or *cuicuimodi* are found in Cicero[3]

---

[1] E g XII Tab i 1, 'Si in jus vocat, ito, ni it, antestamino, igitur *em* capito,' and viii 12, 'Si nox furtum faxsit, si *im* occisit, jure caesus esto' The existing remains of the XII Tables are given in Wordsworth's 'Fragments,' pp 254–265

[2] For references see Wordsworth, Introd xiii 30 (p 103).

[3] Pro Rosc Amer. 95, 'Vereor enim *cuicuimodi* es,' Att iii 22 ad fin, '*cuicuimodi* agam.'

Dat Sing *ei-ei* on inscriptions, *ei-i* or *ē-i* in Plautus, and Lucr. ii 1136 (*cibus omnis dīditur ei*) *quoi-ei* on inscriptions

Nom. Plur the forms *eis, hisce, ques* have been alluded to under the noun declension (p 114) for examples see Wordsworth, 'Fragments,' Introduction ix 9 and xiii 34 In the feminine *haec* (for the more usual *hae*) is not uncommon e g Virg G iii 305, Aen vi 852 (Cod Pal), vii 175 (Rom), Lucr iii 601 and vi 456, Catullus, lxiv 320

The adverbial forms *postillā, propterea, posteā, anteā, posthāc, antidhāc, quāpropter*, and the numerals *trigintā*, etc, show an earlier neut plural of the pronouns in *a* without increase by *i*, as in *ha-i-c* (*haec*), and are evidence for the original quantity of neut plur *ā*, seen in Sanskrit, and traceable in Latin poetry e g Virg Aen iii 464 *gravidā*, Ter Ad 612 *debiliā* (See Corssen, vol ii p 460, Wordsworth, Introduction ix 10, and xiii 35, and cp Wagner, Introd to Terence, p 14) A form *ead* in S. C de Bacch is disputed, Bopp thinking it accus, Ritschl ablat.

Loc Plur *eis, queis* or *quîs, heis* or *hīs* are all in common use as dative and abl as well as the dative forms in *-bus*, which are more usual with *quo-* Examples of *hībus*=*ho-i-bus, ĭ-bus* and *ī-bus* are given by Wordsworth, p 107

(iii) The defective stems *so-*, *to-* and others are chiefly traceable in adverbial forms.

So- (Sanskrit sa-, Greek ὁ, English *she*, German *sie*) is seen in *i-p-so*, and the old accusatives *sum, sam, sos, sas* in Ennius and the XII Tables (Wordsworth, p 108) *Sic* (*sei-ce*) and *si* (*sei*) *may* be locatives of the same stem but the analogy of Oscan *svai* and Umbrian *sve* (=Latin *si*) rather points to the pronominal element *sva* *Sei, si* (Italian *se*) is the same word as *si-c*, originally a pronominal adverb='there,' 'in that way,' 'in case that,' and so 'thus' and 'if,' cp the use of *so*='if' in English, e g Tennyson's 'Guinevere.'—

'It may be, *so* thou purify thyself,
And *so* thou lean on our fair father Christ,
Hereafter in the land where all is pure
We two may meet.'

Ta-, *to-* (Greek *το-* in *αὐ-τό-ς*, *οὗ-το-ς* and oblique cases of article, declined throughout in *is-to*, see the Table on p. 150) survive in a number of adverbs e.g. *ta-m*, *ta-ntus*, etc. (retaining the vowel *a*), *tum*, *tun-c*, *i-tem*, *au-tem* (*a* sunk to *u* and *e*). *U-ti* (*u-tei*, *ut*) is a locative from this stem, and *au-t*, *a-t*, *e-t* are perhaps locatives similarly shortened. *I-tă* (so in Naevius' Epitaph, '*Itáque* póstquam est Órci tráditús thesaúro') is ablative='this wise' so *aliu-ta*, 'otherwise'.

From *da-*, *do-*, a similar stem to *ta-*, appear to be formed numerous adverbs and terminations, e.g. *-dam*, *-do*, *-dum*, *-dem*, *-de*, as in *quon-dam*, *quan-do*, *do-nec*, *age-dum*, etc., *tan-dem*, *qui-dem*, etc., *in-de*, *un-de*, etc. Into all these forms the idea of *time* enters (not necessarily *duration* of time as distinct from point of time in *tum*, etc., for e.g. *-dum*='now' in *age-dum*, etc., as well as 'while')[1] hence it is possible that they may all be referred to the root *div-*, the origin of *dies*, *de-us* and many Indo-European words for the conception of 'brightness' or 'day' leading to that of 'God'[2], in Sanskrit **Dyaus-pitar** (*Dies-piter*, 'sky-father'), whence *Ζεύς*, *Jup-piter*, *Dius Fidius* (*Ζεὺς πίστιος*), etc., *inter-dius*, *inter-diu*, *prope-diem*, *pri-die*, etc. There is certainly in these latter words and the adverbs of which we are speaking a close parallel between the noun stem *div-* and the supposed pronominal stem *da-*, *do-* and the two stems are identified by Corssen. Other philologists, however, regard the identification as improbable, and it certainly cannot be taken for granted.

Dē (prep.) is abl. from stem *da-*, like *sē-d*, *sē*, from *sa*. *Ia-m* is explained by Corssen (i. p. 213) as =*dia-m*, 'this day' (*die-m*), like Greek *δή*, *ἤδη*, *δήν*. Others refer it to a stem *ja-*, *ya-* (? German *ja*, our *yea*). In *quis-p-iam* its temporal sense is lost but *et-iam*, *quoniam* retain it in their original use.

A stem *na-* (*no-*) or *an-* is supposed to account for *na-m*, *quisnam*, etc. The full form is found in these and various weakened forms in *nu-m*, *nun-c*, *νῦν*, *nem-pe*, *e-nim*, and Greek *νίν*, which last is of course pronominal (see above, p. 145) These are all accus forms *nae* (*na-i*), *nē*, Greek *να-ί*, are locative.

---

[1] On the various uses of *dum*, see Ramsay's 'Mostellaria,' Excursus, ii. p. 184.

[2] On these words, see especially Max Muller's 'Lectures,' Series II, Lect. x. pp. 425-461, 1st ed., and Peile, 'Introduction,' ch. v. p. 122 (3rd ed.)

The stem *an-* is preserved in Greek *ἀνά*, *ἄν*, Latin *an* and *in*, *endo* Its force is 'that,' 'the other' Sanskrit has **aná** and Lithuanian *ana-s=ille.* Curtius compares *ἄν-ω*, and Latin *anhelare*, 'to draw up breath' The negative prefixes *ἀν-*, *ἀ-*, Latin *in-*, Sanskrit **an-**, **a**, German and English *un-*, are perhaps connected with the same stem, *ἄν*, *an* in hypothetical sentences and questions are also akin *In*, *endo*, Greek *ἐν-ί* and *εἰς=ἐν-ς* or *ἐν-ι-ς* are local in meaning the two uses of *in* with acc and abl being parallel to the two Greek forms

The enclitic terminations *ce* or *que* in *hi-c*, *ne-c*, *ne-que*, *at-que*, etc must arise from a stem *co-*, perhaps a variety of *quo-* (= 'who,' 'which,' 'any'), with the demonstrative meaning 'there' *-pe* in *i-p-se*, *quis-p-iam*, *rea-p-se*, etc, and in *qui-ppe*, *nem-pe*, *pro-pe* is possibly a dialectic variety of *ce*, Oscan and Umbrian substituting *p* for *k* (by 'Labialism,' see chap iv p 50)

CHAPTER VIII

VERB INFLECTION

THE Verb (*ῥῆμα*, *verbum*, the 'word' *par excellence*) in Greek or Latin exhibits a much greater variety of inflection than the Noun Time, mood, person, number, and voice are all expressed, and in some forms all at once, by inflectional additions to the root or simplest form expressing the idea, this verbal root being in no way different from a nominal root, so far as any power of expressing action etc is concerned Verbs are thus only nouns with a pronominal affix The *abstract idea* of e g action, motion, sensation, etc, can be expressed equally by a nominal or a verbal root, but when expressed by a verbal root it is further brought into relation as a verb with other words in a sentence, (1) by *Person endings*, attaching it to a definite *subject* or subjects (the distinction of Number being expressed, as in Noun Inflection), (2) by *Modal* elements, defining the aspect under which the action is regarded, as a fact or a supposition, (3) by *Tense* elements, ascribing it to a particular relation in *time*.

A verb form, then, is distinguished from a noun form mainly by the greater number of different elements combined in it In any case-form of a noun we find one invariable element, the stem, and one variable element, the case-ending, as in *παιδ-ός*, *παιδ-ί*, *παιδ-ῶν*, etc , or at most a vowel besides, inserted to connect the case-ending with the stem, as in *παίδ-ε-σσι* But

there are very few verb forms of so simple a character In e g *ἴ-μεν* we have only stem and inflection, in *ἄγ-ο-μεν*, stem, 'thematic' vowel, and inflection, but in *ἴωμεν, ἄγοιτε*, we have an additional element denoting *mood,* in *ἀγάγοιτε* a further addition (to the verb stem) denoting *time,* in *ἤγαγον* another addition, viz the *augment.* And a comparison of any of the more complex verb forms, in a 'synthetic' language like Greek or Latin, with their equivalents in an 'analytic' language like our own, is the best illustration of the general difference between an analytic and a synthetic language, and the specially complicated nature of the verb forms in the latter The analysis of two such forms as *ἐφιλήσαντο* and *regeremus* shows (*a*) in
1 2 3 4 5 6
ἐ-φιλή-σ-α-ντ-ο, 'they loved themselves,' 1 augment, 2 verb-stem, 3 addition to form tense-stem, 4 'thematic' vowel added to the stem before inflection, 5 relic of a pronoun, denoting 3rd per plur, 6 voice-letter, indicating middle or
1 2 3 4 5
passive (*b*) in *reg-er-e-mu-s*, 1 stem, 2. sign of past time, 3 sign of mood, 4 sign of 1st personal pronoun, 5 plural sign, denoting others with the person speaking If *s* be changed to *r* (*regeremur*) it denotes that the speaker and others with him are *passive* instead of active

The example last given (*reg-er-e-mus*) shows the order in which verb inflections are usually attached to the stem—viz tense, mood, person, number, and voice Modifications for tense and mood come between the stem denoting the idea of action, and the personal pronoun denoting the agent, inflections of number and voice, which affect the position of the agent by showing him to be either one of a number or passive instead of active, are appended after the personal pronoun.

The analysis of verb forms is thus more complicated than that of noun forms from the greater number of elements to be distinguished There is also a further difference, that whereas in explaining the different forms of every single noun we can begin with one invariable element, i. e with one stem only, in the explanation of verb forms we must assume several fixed points, from each of which we start as from a separate stem in the explanation of certain groups of forms. These speci stems, or subordinate centres of classification formed from th verb-stem common to all, are known as *Tense Stems*, th elements of inflection by which *time* is denoted being of a les separable and general character than those of person or mood and being in fact suffixes for the formation of subordinate stems each of which is the permanent element or stem in a series o verb forms. Thus in a Latin verb the perfect and supine often show a different stem from that which appears in the present tense. and in a Greek verb such elements as *ἀγαγ-* in *ἀγάγ-ωμεν*, *ἀγάγ-οιτε*, *ἀγαγ-εῖν*, *ἀγαγ-έσθαι*, *ἀξ-* in *ἄξομεν*, *ἄξοιμεν*, *ἄξειν*, etc., *λυσα-* in *ἔλυσα*, *λύσα-ι-μεν*, *λύσα-ς*, *λύσα-σθαι*, or *λελυ-* in *λέλυ-κα*, *λελυ-μαι*, *ἐ-λέλυ-το*, have each a comparative permanence among a series of verb forms, and must be regarded as *stems*, though not the verb-stem, in each case. All scientific analysis, therefore, of verb forms in Greek and Latin must take into account the special tense-stems formed from the verb-stem (e. g. *ἀγαγ-* and *ἀξ-* from *ἀγ-* the stem of *ἄγω*, *λυσα-* and *λελυ-* from *λυ-* the stem of *λύω*, *τυπτ-* and *τυψα-* from *τυπ-* the stem of *τύπτω*, appearing in *ἐ-τύπ-ην*). and thus the question of *stem formation* must accompany that of *inflection* in the case of verbs to a much greater degree than in the case of nouns. 'To state the case briefly, it may be said that in the noun, formation—that is, formation of the word, or more correctly of the stem—and inflection in the narrower sense are distinct; but in the verb they combine, and encroach each upon the other. He alone is completely master of the verb forms who from the verb-stem common to all can first form all the special stems, and secondly can inflect the stems when correctly formed[1].' It is not however necessary to follow the rigidly scientific order of (1) formation, (2) inflection, or learn always to form uninflected stems before we know how to inflect them when formed. but the formation of stems must in the case of verbs be discussed at least *pari passu* with their inflection. It is not enough to understand how to inflect *τύπτω*, *-εις*, *-ει*, *ἔτυψα*, *-ας*, *-ε*, etc., without understanding how these different forms are connected together in one verb

---

[1] Curtius, 'Elucidations,' p. 93

In discussing the elements of Verb Inflection, it is usual to take them in the reverse order of their attachment to the verb-stem, beginning from the end of the word with (1) the most universal and characteristic inflections, the *person*-endings, with their forms for active and middle (passive) *voice* and their inflections of *number*, (2) signs of *mood*, (3) *tense*-inflections, i e. the formation of 'tense stems'

I *Person-endings*, i e pronominal suffixes of 1st, 2nd, and 3rd person in singular, dual, and plural number There are wo series for (1) active, (2) passive 'voice,' and in each series here appear a fuller and a weaker form, which are distinguished s (*a*) *primary* (*-mi*, *-si*, *-ti*, etc, used with present, future, nd perfect tenses), (*b*) *secondary* (*-m*, Greek *-ν*, *-ς*, *-τ*, used with ugmented tenses of Indicative), e g —

Primary, *τίθη-μι*, *τύπτο-μαι*, *τύπτο-νται*

Secondary, *ἐ-τίθη-ν*, *ἐ-τυπτό-μην*, *ἐ τύπτο-ντο*[1].

II. *Mood Signs*, to distinguish the Conjunctive and Optative Moods' from the Indicative Of the other so-called 'Moods,' e 'Infinitive' is a verbal noun, while the 'Imperative' is stinguished from the indicative by a weaker form of person-ding, standing in the relation not of nominative but of *cative*, and is thus a sort of verbal interjection

[The force of Moods is a question of Syntax but it may be ted here that there can be, strictly speaking, only *two* 'moods' *odi actionis*, modes or aspects under which the action is garded), viz (1) direct assertion that it is taking, has taken, will take place—'Indicative' Mood · (2) the idea or supposion of its taking place in past, present, or future time—'Subctive' or Indirect Mood This latter includes two distinct series of forms, called respectively Subjunctive and Optative 'Mood,' and denoted in Indo-European by distinct suffixes; but the grammatical relation of these two so-called 'Moods' is rather analogous to that of Primary and Historic Tenses in the Indicative Mood, and in the Latin verb but one 'Su junctive Mood' is recognised. The position of the sign mood (see above, p 159) is appropriate to its functions, modifying the relation between the subject (person-ending) an action (verbal stem)]

---

[1] Curtius' 'Greek Grammar,' § 226.

III. *Tense Stems* may be thus enumerated —

1. Perfect stem, originally formed by reduplication.
2. Simple or Strong Aorist (2nd aor), generally ex hibiting the verbal-stem in its simplest form [1].
3. Present stem, from which with the augment is forme the Imperfect in Greek
4. Weak or Compound Aorist.
5. Future stem.
6. Strong Passive Aorist (2 aor. pass)
7. Weak Passive Aorist (1 aor pass.).

By 'Strong' tense-stems we mean those which are formed from the verbal stem [2] by reduplication or increase. 'Weak' or 'Compound' stems are formed by combination of the verbal stem, generally with some formation from the root *as* (ἐς), 'to be.' Under this head fall also such subordinate formations as the Pluperfect and 'Futurum Exactum' in Greek and Latin, from the Perfect Stem, or the special formation of the Imperfect in Latin.

Two other elements enter into Verb Inflection, an explanation of which may be given here—the Augment and the Thematic (or Connecting) Vowel.

IV *The Augment*

Language seems originally to have employed, as a means for expressing past time, the Augment—in Sanskrit **a**, in Greek ε (**a-bhar-a-m**, *ἔ-φερ-ο-ν*), prefixed to aorist, imperfect, and pluperfect tenses in both those languages It is always accompanied by the secondary person-endings: but Curtius ('Das Verbum,' p. 104) suggests that it was originally the sole expression of past time, and by increasing the word at the beginning gave occasion for shortening the terminations. It was probably at first a separable prefix for (1) in older Sanskrit it is separable and (as in Homer) omitted at pleasure, (2) this separable character would help to account for its total disappearance in Latin, and in Greek from all moods but indicative. Of its origin there have been various theories, but the only view worth noticing is that now adopted (e g by Curtius[1], Schleicher, etc), viz. that it is a demonstrative pronoun-stem referring to past time, like the German *da*, *damals* Its original form in Greek (as in Sanskrit) was *ἀ*, of which traces remain in the Greek dialects (e g. *ἄσβεσθε*, *ἄβραχε*, *ἄδειρε*) This before a consonant became *ε* ('Syllabic Augment') before a vowel it took the form of that vowel and combined with it to form one long syllable ('Temporal Augment') Thus, e g the Doric *ἆγον* (imperf of *ἄγω*)=*ἀ-αγ-ον* and *ὦρτο* corresponds to Sanskrit **ārta**, which no doubt arises from **a-arta** This contraction took place before the separation of the *a* sound into *a*, *e*, *o* (p. 36) and after the root *ar-* became fixed in Greek as *ὀρ-*, *ὦρτο* stood to *ὄρνῦμι* as **ārta** to **ar-nau-mi** in Sanskrit. With initial *ι* and *υ* we should have expected a diphthong, i e *αι*, *αυ* (*ει*, *ευ*) but verb-stems beginning with *ι* or *υ* seem to have followed the analogy of other initial vowels, and no doubt the augment came to be regarded as nothing more than a lengthening of the nitial vowel

---

[1] As few Greek verbs develop both the strong and weak forms of the aorist; there are practically five groups of tenses in each Greek verb, viz. Present, Aorist, Future, Perfect, and Aorist Passive.

[2] See Curtius' 'Greek Grammar,' § 246.

The separable character of the augment in Sanskrit and Homeric Greek is no proof that it is unessential. 'Language' as Curtius well remarks) 'not unfrequently lays aside individual ymbols of meaning, when by means of them forms have been oined so distinctly marked, that the original elements are no onger absolutely necessary' In Attic Greek it is never mitted except in *χρῆν* impf of *χρή*; in a few instances at the eginning of lines in the speeches of *ἄγγελοι* in the Tragedians[2];

---

[1] 'Elucidations,' p 110; 'Das Verbum,' pp. 104 sqq. (pp 72 sqq Engl. anal.).

[2] In such examples as Soph Oed Col. 1602, *ταχεῖ πόρευσαν*, and 1608, *πρὸς πεσοῦσαι κλαῖον*, we probably have instances of 'prodelision' of the itial vowel *after* a final vowel sound of the preceding word.

and occasionally in pluperfect tense (but mainly in the Hellenistic Greek of the New Testament).

The position of the augment in verbs compounded with prepositions (Curtius, Greek Grammar, § 238) is due to the looseness of connection between verb and preposition Where however the parts of a compound verb are not so separable, the augment is placed first e g *ᾠκοδόμησα* from *οἰκοδομέω*

Certain apparent irregularities in the form of the augment (Greek Grammar, §§ 236, 7) may be explained by the loss of a consonant —

(*a*) *ει* instead of *η* before *ἐθίζω, ἕλκω, ἕπομαι, ἐργάζομαι, ἔχω, ἕρπω, ἑστιάω, ἐάω*, etc. With the exception of *ἐάω*, the origin of which is doubtful, it can be shown that all these verbs began originally with a consonant, and therefore had originally the syllabic augment *ε*, which after the loss of the initial consonant naturally coalesced with the following *ε* into *ει* e g *ϝεργάζομαι* (‘*work*,’ see p. 68), imp *ἐϝεργαζόμην*. (*σ*)*ερπω* (Latin *serpo*), *ἔ-σερπον, ἕ-ερπον ϝελίσσω* (*volvo*), *ἐ-ϝέλισσον*[1].

(*b*) Syllabic augment before a vowel in *ἕαδον* (*ἁνδάνω*), *ἐώθουν* (*ὠθέω*), *ἐωνούμην* (*ὠνέομαι*), etc[2] Thus *ἁνδάνω*=*σϝανδάνω* (Latin *suavis*, cp the Homeric form *εὔαδε*), *ὠνέομαι*=*ϝωνέομαι* (Latin *vendo*). The loss of the consonant was perhaps in the first instance compensated for by lengthening the preceding vowel, i e. the augment itself, whence such forms as Epic *ἠείδη*=*ἐ-ϝείδη* (root *vid-*) but afterwards the reverse process took place and the following vowel was lengthened, whence such forms as *ἐ-ήνδανον, ἐ-ῳνοχόει* (Homer), *ἐ-ώρων* (root *ϝορ-*, cp Latin *ver-eor*), *ἑᾱλων*, apparently with a ‘double augment’ [Two exactly similar processes of compensation for the loss of *ϝ*(*υ*) are seen in the forms *βασιλῆ-ος, βασιλέ-ως*, both representing *βασιλέϝ-ος* (stem *βασιλευ-*), see above, p 118.]

(*c*) Doubling *ρ* after augment is generally owing to the fact that a consonant has fallen out before it, which consonant can sometimes be discovered by comparison with the kindred languages, e g in *ἔρρεον=ἔ-σρεϝ-ον*, Sanskrit **a-srav-a-m**, from root *σρυ-*, Sanskrit **sru-**, *ἔρρεπον=ἔ-ϝρεπ-ον* from a root *ϝρεπ-*, the *ϝ* of which is seen in *καλα-ῦροψ*, *ἔρρηξα=ἔ-ϝρηξα* (cp. *freg-i*). The Homeric forms *ἔλλαβε*, *ἔμμαθε*, *ἔσσευα* are perhaps due to the analogy of those already mentioned[1].

---

[1] Curtius (‘Das Verbum,’ I. pp. 121–126) examines fourteen words, in seven of which he traces the disappearance of *ϝ*, in five that of *σ*

[2] *ἐ-άγ-ην, ἐάλην, ἐ-άλ-ων, ἐ-άνασσε* (Alcaeus), *ἐ-εῖπον, ἐ ἑσσατο, ἕ ηκε, ἐ-ώρων, ἀνέῳγον*, are other examples under this head. Most of the words referred to are discussed by Curtius in his ‘Principles of Greek Etymology.’

V *The 'Thematic Vowel'* In the ordinary conjugation of Greek verbs, the person-endings are not added directly to the stem, as in the conjugation of 'verbs in *-μι*' (e g *ἐσ-μέν*, *δί-δοτε*) but between the pure verbal or tense stem and the inflection there intervenes (especially in Present and Strong Aorist) a vowel which appears as *ο*, *ω* or *ε*—e g *λέγ-ω=λεγ-ο-μι* or *λεγ-ω-μι*, *λέγ-ο-μεν*, *λέγ-ο-ντι* (Doric for *λέγουσι*), *ἔλεγ-ε-s*, etc In Latin it appears as *o*, *i*, *u*—*leg-o* (=*leg-o-mi*), *leg-i-mus*, *leg-u-nt*, and perhaps as *e*, *i* in Noun declension *ped-e-m*, *homin-i-bus* (see however p 116).

The nature of this vowel has been much disputed Bopp (Comp Gram § 495) regarded it as a pronominal element 'through which the action or quality, which is expressed in the root *in abstracto*, becomes something concrete—e g the expression of the idea "to love" becomes the expression of the person "who loves"'

Curtius in his 'Tempora und Modi' (1846) maintained that this vowel is a purely phonetic element, or, as it was called, a 'connecting vowel,' a device of language to render easier the pronunciation of two contiguous sounds—as e g in the forms *βρεμ-έ-της*, *νεφεληγερ-έ-της*, *γεν-έ-της*, *gen-i-tor*, Sanskrit **ján-i-tā**; *φέρ-ε-τρον* beside *φέρτρον*, Sanskrit **tup-i-tas** beside *τυπτό-s*, in such noun forms as *homin-i-bus;* and in verb forms like *λέγ-ο-μεν*, *πειθ-ό-μεθα* In all these forms the pronunciation is no doubt rendered easier by the insertion of a vowel; while forms like *τυπτ-μεν*, *πιθ-σθε* could hardly be pronounced at all without it: and thus the principle of euphony seems to coincide with the effort to attain clearness, for the direct addition of person-endings to consonant-stems could not have been consistently carried out without the elision or modification of important consonants (e g. the *m* or *s* of first or second personal pronoun) and consequent obscurity of meaning where clearness was all important.

---

[1] See Monro, Hom Gr § 67.

This theory of a 'connecting vowel' has much at first sight to recommend it for it accounts, by a sufficiently natural explanation, for a large number of the phenomena to which it is applied in Greek and Latin It is not, however, borne out by the phenomena of verb-conjugation in Sanskrit[1] and it has now been abandoned by Curtius himself, who, in his work 'Das Verbum der Griechischen Sprache,' explains the vowel in question as being 'thematic,' i e a suffix to or increase of the stem or 'theme' previous to the reception of inflections, thus virtually returning to the theory originally propounded by Bopp (above, p 165)[2] Instead of the person-endings being attached directly, for example, to the root *ag*, a nominal stem *aga* is formed from this root by addition of the pronominal suffix *a* (an addition which, in the early stages of word-formation, has the same 'attributive' force as an adjective or pronoun with a substantive has in a more developed stage of language, e g *ag-a*, Greek *ἀγ-ό(-s)* root *ag* . *οὗτος ὁ ἀνήρ* *ἀνήρ*), and this stem *aga* is combined as a *verbal* stem with *ta*, (*ti*), the sign of 3 sing (*aga-ti* = *ἄγει*, Latin *agi-t*), just as in its capacity of *nominal* stem it is combined with the demonstrative element *s*(*a*), the sign of nom sing (*aga-s*=*ἀγό-s*) So *ag-mas*, a conceivable 1 plur form, would stand to *aga-mas* (*ἄγο-μες*, *agi-mus*), much as the Latin nominal-stem *ag-men* might stand to a conceivable form *agi-men* on the analogy of *regi-men*. These *a*-stems had in course of time so overgrown the earlier stratum, so to speak, of forms which attached the person-endings directly to the root, that they became the rule of conjugation, the others remaining as a group of more or less exceptional and anomalous forms (in the conjugation of verbs in -*μι*).

---

[1] E.g in verbs of the 'Tud' class of verbal bases ending in अ, a, the accent always falls on the a added to the root, thus, base तुद्, tud, to strike, 3 sing तुदति, tud-á-ti This stress is against the vowel being an unmeaning phonetic adjunct and so indeed is the employment of अ, a, the strongest and fullest of all the vowel sounds

In one sense, of course, it is a 'connecting' (or perhaps we should rather say 'intermediate') vowel, as coming between the original stem or root and the terminations

'Das Verbum,' I. p. 14 (p. 9 Engl transl)

With this increase of verbal stems by *a* Curtius would class the addition of the suffixes *na*, *nu* (e g in *σκίδ-να-μεν*, *δείκ-νυ-μεν*), which a comparison of the cognate languages shows to have been a very early feature of Indo-European word-formation, *na*, *nu* being 'thematic,' inasmuch as they are suffixes used to form 'themes' from roots. But this group of verbs belongs practically to the 'non-thematic' conjugation of verbs in -*μι*, and the term 'thematic' is generally restricted to those verb-forms whose stem receives the addition of the 'thematic vowel' properly so called—*ε* or *ο* in Greek, *o*, *i*, or *u* in Latin

Classification of Verbs

A Latin :—

The traditional classification into four 'Conjugations,' according to the vowel preceding -*re* in the infinitive Mood, establishes, by a happy instinct rather than upon any scientific principles, a tolerably complete classification, upon the same principle as that already applied to nouns (pp 108, 109), viz according to the final or 'characteristic' letters of the stem. The Latin Grammar gives us under its four heads —

1 Vowel-stems in *ā*- (*amā*-)
2 Vowel-stems in *ē*- (*monē*-)
3 Consonant-stems and stems in *ĭ*- *ŭ*- semivowel (*reg-o*, *capi-o*, *tribu-o*).
4 Vowel-stems in *ī*- (*audī*-)

This division may be retained, but simplified into the broad distinction, already drawn in case of nouns, between (*a*) ***consonant-stems*** (including *i*-, *u*- semivowel), i e. the '3rd conjugation,' and (*b*) *vowel-stems*, i.e the 1st, 2nd, and 4th 'conjugations.' The fluctuating forms of tenses may be considered separately under the different 'tense-stems.'

B. Greek —

The traditional classification of Greek verbs into verbs in -*ω*, **In Greek.** contracted verbs (in -*ῶ*), and verbs in -*μι*, though in itself far from scientific, may be to a certain extent utilised as the basi of philological analysis. The -*ω* of 1 sing. represents, as we have seen, the thematic vowel, which is a distinctive feature o the ordinary conjugation of verbs: while the verbs in -*μι* stand apart as a form of conjugation, rarer, and for several reasons presumably older, than that in ordinary use In these verbs, for example, (1) the pronouns which form the person-endings are less obliterated, and are added directly to the stem (*ἐσ-μέν*, *δίδο-τε*) without the intervention of a thematic vowel, (2) this form predominates in Sanskrit, and is more frequent in the oldest dialects of Greek , (3) the verbs in -*μι* contain the most elementary roots and denote the simplest ideas 'to be,' 'to give,' etc Putting these then aside as one form of conjugation, we may set on the other hand the conjugation of all other verbs (treating the fluctuating forms of tenses under the head of Tense-formation), dividing these according to the final letter of the Present-stem (exclusive of the thematic vowel). Thus we have

I. Verbs in Ω
 A *Vowel-stems*
  1 Uncontracted, *λύ-ω*
  2 Contracted, *τιμά-ω*, *ποιέ-ω*, *δουλό-ω*
 B. *Consonant-stems*
  1 Guttural, *πλέκ-ω*, *ἄγω*, *μάχομαι*
  2 Dental, *ψεύδ-ο-μαι*, *πείθ-ω*, *κομίζ-ω*.
  3. Labial, *πέμπ-ω*, *λείπ-ω*, *τρέφ-ω*, *τρίβ-ω*
  4 Liquid, *δέρ-ω*, *ἀγγέλλ-ω*, *δέμ-ω*, *φθίν-ω*
II Verbs in MI.
  1 Inflections of the Present joined directly to stem *φη-μί*
  2. Present stem formed by adding *νυ*, *να* to the pure stem , *δείκ-νυ-μι*, *σκίδ-νη-μι*. (These verbs belong to this conjugation only in respect of the inflection of the Present stem.)

This 2nd principal Conjugation (verbs in -*μι*) differs from the 1st (verbs in -*ω*) only in the inflection of the Present and Strong Aorist stems: and here the basis of distinction is the presence or absence of the 'thematic vowel,' a distinction which appears in the same manner in Sanskrit, e. g **ás-mi**, **bhar-ā-mi**, compared with ἔσ-μι, φέρ-ω(μι) The inflections of persons themselves are not distinct in the two classes, except so far as the -μι verbs retain a fuller and less impaired type of the person-endings—especially in their 'primary form' (see above, p 161) —and offer greater facilities for tracing the origin of these inflections

I *Person-endings* (*Active*).

1 *Sing* Sanskrit **-mi**, Greek -μι, from 1st pers pronominal stem *ma* (weakened as in *mi-hi*, and German *mir*) Secondary form Sanskrit **-m**, Greek -ν, of imperf and 2 aor The full termination remains in pres indic act of 'verbs in -μι,' in certain Homeric conjunctive forms, ἐθέλω-μι, εἴπωμι, etc , and in optative forms, τύπτοι-μι, τύψαι-μι In Latin it appears as *-m* in two present tenses indic *sum* and *inquam*, and in the terminations of 1 sing imp and plup indic and all subjunctive tenses throughout, and in fut indic of consonant and ī- verbs. It remains also in English *am*, German *bin*

1 *Plural* Sanskrit **-mas**, Greek -μες (Doric), Latin *-mus* Two explanations (or rather, guesses at explanation) are given for this form, (1) that it=*m*+*as* of plural nom. (as in πόδ-ες, *pad-as*) (2) that it=*ma-si*, i e. 1st+2nd pers pron, so that 'we'='I+thou' A form **-masi** is actually found in Vedic Sanskrit. The ordinary -μεν of Attic Greek perhaps arises from -μες by loss of ς, and subsequent addition of ν.

1 *Dual* Sanskrit **-vas**, a variation of nom. plur *-mas* cp. **vayám**, nom pl of 1st pers pronoun (p 144). In Greek the 1 pers plur of active forms serves as nom dual Lithuanian retains *-va*, e g. *ės-va*=(*a*)*s-vas*, 1 pers dual of Sanskrit **as-mi** (*sum*).

2 *Sing.* The 2 pers pronominal element *tva* (see p 145), or by loss of *v* sound *ta*, appears in Indo-European inflection with both consonant and vowel weakened, i. e. *t* by aspiration to *th* or *dh*, or by weakening to *s* (p. 78) and *a* weakened to *i*. The series of possible forms, then, of this suffix is *-ta*, *-tha*, *-thi* (*dhi*), *-si*, *-s*. Of these the last two are most generally found,

as primary and secondary forms respectively; thus Sanskrit has in pres. indic. **-si**, in imperfect **-s**, Greek -*σι* (as in *ἐσ-σί*, Ionic for *εἶ*) and -*ς* (*ἔφερε-ς*). The ordinary termination in -*εις* is variously explained The primary form is admitted to be e. g. *φέρε-σι*, whence, by simple loss of final *ι*, comes the Doric form in -*ες*, e g *συρίσδες* (Theocr. i. 3), *ἀμέλγες* (iv 3), just as *τίθη-σι* became *τίθης* Some hold *φέρεις* to arise from raising -*ες* in compensation for the loss of *ι*, the changes being *φέρε-σι*, *φέρες*, *φέρεις* Others (as Curtius[1]) make *φέρει-σι* the middle step, regarding the first *ι* as an 'anticipatory' sound, an echo of the following *ι* of the termination, cp the subj forms *φέρῃς*, *φέρῃ*, where (says Curtius) there is no other possible explanation of the *ι* subscriptum Others (as Schleicher) regard the *ι* in *φέρεις* as thrown back from *φέρεσι* (as e g in *μέλαινα*=*μελανyα*, *φαίνω*=*φαν-yω*) In Latin *ĕs*=*es-si* (*ἐσσί*), *ēs* (*edo*)=*ed-si*, *legis* =*lege-si* The original quantity seems to have been *legīs* and as we know that *ī*, *ei* are often interchanged, we may assume *legeis*=Greek *λέγεις*, and accountable for by whatever interpretation we give to the latter It is worth noticing that in Boeotian Greek (where *ει* becomes *ῑ*) *λέγῑς*, *λέγῑ* are the regular forms

The imperative 2 pers. suffix -*θι* (=Sanskrit -dhi) is an older form, commoner in Epic dialect (*τέτλα-θι*, *δίδω-θι*, *ὄρνυ-θι*, etc), but surviving in Attic forms, like *γνῶ-θι*, *ἴσ-θι*=*ἔσ-θι* from stem *ες*- or *ϝιθ-θι* from stem *ϝιδ* (*δ* assimilated, p 74), *ἴ-θι*, *στῆ-θι*, and 1 aor. pass. *τράπη-θι*, *τύφθη-τι* (by dissimilation, p 79). In ordinary Greek this termination is changed in various ways:—

(*a.*) The vowel is dropped, and *θ* changed into the sibilant, whence *δός*, *θές*, *σχές*=*δό-θι*, *σχέ-θι*.

(*b*) *θ* is dropped, and the preceding vowel lengthened, whence *ἵστη* (*ἵστα-θι*), *δίδου* (*δίδο-θι*), *δεικνῦ* (*δείκνυ-θι*).

(*c.*) In 2 sing imper. act. of ordinary conjugation, the termination is lost altogether, and the final -*ε* of *τύπτ-ε*, etc is the thematic vowel. In 1 aor. imper, instead of an analogous *λῦσα* or *λῦσε*, we find *λῦσον*, which Curtius[2] explains (after Giese,

---

[1] 'Das Verbum,' pp 201–205 (1st edition); pp. 139–142 Engl transl.

[2] 'Das Verbum,' II p. 265 (p 450 Engl. transl.).

Aeol Dial p 110) as the result of a nasal after sound, dulling *a* into *o*. But nothing certain is known about this form.

In Latin the termination *-dhi* of imperative has disappeared altogether, leaving the bare stem (or stem + connecting vowel), as *i*, *amā*, *es*, *curre*

The oldest and least corrupt form of this inflection (*-ta*, *-tha*) is retained in the perfect-stem, e g Sanskrit **dadi tha** = Latin *dedisti*, Sanskrit **vēt-tha** (stem **vid-**) = Greek *οἶσθα* (stem *ϝιδ*, raised to *ϝοιδ-* as Sanskrit *vid* to *vēd* *οἶδ-θα* becomes by dissimilation *οἶ-θα*) In *οἶσθα*, *ἦσθα* the *σ* preceding *θα* is satisfactorily accounted for as part of the stem But there are a number of other instances (chiefly in the Epic dialect) of *-σθα* as 2 sing. termination, where no such account of *σ* is possible. These are thus enumerated by Curtius ('Das Verbum,' p. 50, English Transl pp 34, 35) —

(*a*) Twelve Homeric subjunctives *ἐθέλησθα* (Il i 554, and fifteen other passages), *εἴπησθα* (xx 250, Od xi 224, xxii 373), *βάλησθα* (Od xii 221), *βουλεύησθα* (Il i 99), *δηθύνησθα* (Od xii 121), *εὔδησθα* (viii 445), *ἔχησθα* (Il xix 180), *ἴησθα* (x 67), *πάθησθα* (xxiv 551), *παρεξελάσησθα* (xxiii. 344), *πίησθα* (xxiv 260), *σπένδησθα* (Od iv 591)

(*b*) Five Epic, four Aeolic, one Doric Present Indic., and one Future Indic *τίθησθα* (Od ix. 404), *φῆσθα* (Il xxi 186), *διδοῖσθα* (Bekker *δίδωσθα*, Il xix 270), *εἶσθα* (x. 450), *ἔχεισθα*, *φίλησθα* (Sappho), *ἐθέλεισθα* (Theocr. xxix 4), *ποθόρησθα* (vi. 8), *χρῆσθα* (Megarian, in Arist Ach. 778), *σχήσεισθα* (Hymn Cer. 366)

(*c*) Imperfect Indic · (*ἦσθα*), *ἔφησθα* (Il. i 397), *ἤεισθα* (Plato, Euth. 4, Tim twenty-six in compounds), *ἤδησθα* (v. l. *ἤδεισθα*), Od xix 93, and Attic.

(*d*) Optative, *βάλοισθα* (Il. xv. 571), *κλαίοισθα* (xxiv 619), *προφύγοισθα* (Od. xxii. 325), *εἴησθα* (Theognis)

Various explanations have been given of these forms —

(1) Bopp suggested that they were due to a false analogy from *οἶσθα*, *ἦσθα*, causing *-σθα* to be regarded as the termination. But we should expect to find the effects of such analogy either in *one* or *two* isolated cases, or carried to a much greater

extent, as some hold to be the case with the Teutonic termina tion *-st* (e.g German *bist*, *hast*, *gib-st*, cp. English *doest*)

This *st-* is held by some philologists (e.g. Schleicher, Comp § 272) to arise by false analogy (such as that supposed by Bopp for *-σθα*) from the case of dental stems, where *t*, *d* became before *-ti*, e.g Gothic *vais-t* (stem *vit*)=Greek *ϝοισ-θα*, this *st* being first applied to all perfect stems, and then extended to all 2 pers sing as in German and English With this view Bopp's explanation of *-σθα* as given above would of course harmonise, the difference being that the analogy is more consistently and naturally carried out in the Teutonic than in the Greek forms.

(2) The view of the older grammarians, followed by Schleicher (§ 272) and others, is that these forms in *-σθα* are a later formation by the addition of *-ta* to the customary form ending in *s*, e g *ἔχεισ-θα*, *βάλοισ-θα*, etc. Language no doubt offers analogies to such a re-creation of a grammatical form by the fresh addition of an element, which is there already, but obscured (e.g *τέου-ς*, *μέου-ς*, p. 143) and in any case the literary dialect of a nation is formed by the survival of the fittest among a number of spoken forms It is therefore conceivable that this form in *-σθα* may have been one of such by-forms, holding its ground still in Homer before the introduction of writing, but then disappearing Nor is it necessary that the explanation of Greek *-σθα* should be uniform with that of Latin *-sti* or Teutonic *-st*, if we suppose that the development in question took place *after* the separation of these different branches of the Indo-European family

The original 2 sing element, however, is perfectly recognisable, though weakened, in *ἔχεις*, and it is not easy to conceive any motive for the addition of *ta*. Moreover, the stage of word-change at which *ta*=*tva* had sunk to *s* (ς) implies that this pronominal element was no longer recognisable in its earlier form, and it is probable that, granting the possibility of such repetition as is assumed, we should not find the repeated ending in so early a form

(3) Another explanation connects it with the termination

-σαν of 3 pers plur (see below, p 176) by referring it to the root *ἐς* -*σθα* would then =*ἐσθα*, as *-σαν* in *ἔδοσαν*=*ἔσαν(τ)*= *erant* The Latin perfect forms *vidi-sti*, *vidi-stis* (*estis*), and *vide-runt* (*sunt*) seem to bear out this view and it is certainly difficult to lose sight of the similarity between the Latin *-sti* and Greek *-σθα*, though (as will be seen below) the analogy of the two forms is not certain—one interpretation making the *is* of e g *dēl-is-ti* a tense suffix as in infin *is-se*, and perhaps originally a part of the verb *sum.*

(4) Curtius, comparing the form *-σθα* with the other verb terminations in which we meet with the combination *σθ*, regards this *σθ* as the result of phonetic change from an original *ττ* The terminations which exhibit *σθ* are—

1	2 Sing	Act		*-σθα* (*ἔφη-σθα*)
2	1 Plur	Mid		*-μεσθα* (ord *-μεθα*)
3	2 Plur	„		*-σθε*
4	2 Du	„		*-σθον*
5.	3 Du	„		*-σθον*
6	3 Du.	„		*-σθην*
7.	3 Sing	„	Imper	*-σθω*
8	3 Plur	„	Imper.	*-σθων*
9	3 Du	„	Imper	*-σθων*
10	Infin	„		*-σθαι*

Certain dialectic forms, e g *χρήστω*, *ἐλέστω*=*χρήσθω*, *ἐλέσθω* (Locrian), *ἔλεσται*=*ἐλέσθαι*, *ἄρεσται*, *χρήσται*, etc, seem to show that *θ* is not an original and necessary part of these terminations, but may arise from an original *τ* while such forms as *ἀποϝειπάθθω* (Cretan) seem to be a double dental sound, the first of which might become *σ* by dissimilation. Following up this clue, Curtius explains the Imperative middle forms (7, 8, 9) as arising from *ττ* which becomes by dissimilation *στ*, and finally, by the assimilating influence of *s* on a preceding tenuis, *σθ*. Thus *φάσθω*=*φά-τ-τω-(τ)*, the *τ-τω* being the 3 personal pronoun added *twice* for expression of middle voice. The Dual forms (5, 6) would arise in the same way, there being no original difference between dual and plural: and so would the 2 pers forms -*σθε*, -*σθον*, the first *τ* in their case being th *t* of 2 pers pronominal stem *tva* Thus for seven of the abov forms (Nos 3–9) the successive change *ττ*, *στ*, *σθ* is established

For 2 sing -*σθα* the analogy of the parallel forms -*σθω*, -*στω* and -*σθαι*, -*σται* suggests a parallel form -*στα*, corresponding t the Latin -*sti*, a correspondence which is further borne out by Gothic *saisô-st*, i e *sedisti* (the exact parallel to which would be a form *sesi-sti*, supposing it to exist) Assuming *στ* of *στα* to arise, as in the other forms, from *ττ*, this *ττ* may be due to 'progressive assimilation' from *tv* of the pronominal stem *tva* (as e g *τέτταρες*, cp. with Indo-European *katvaras*), and thus we have *tv*, *ττ*, *στ*, *σθ* as the scale of change from *tva* to *σθα*. *ἔφησθα* would thus represent an earlier *ἔφηττα*, just as *φάσθω* represents *φάττω*.

[Where the *data* are so few and uncertain as in the case of this 2 sing -*σθα* it is difficult to pronounce positively in favour of one among several conflicting theories The high authority of Curtius claims attention to his view, and it is perhaps based upon wider induction from observed facts than some other views but Curtius, like others, has to depend upon assumptions at one stage or other of his argument, and our decision will after all be only an estimate of the comparative probability of unverifiable hypotheses In such cases it seems better simply to call attention to the known facts, and to the most plausible theories that are based upon them, without attempting to lay down that one is right and all the others wrong]

2 *Plural.* If 1 plur. -*mas*=*ma-si*, i. e. *ma-tva*, 'I+thou,' we should expect in 2 plur a form =*tva-tva*, expressing 'thou +thou.' No such direct evidence as the Vedic -*masi* of 1 plur. is forthcoming; Sanskrit has only -**tha** (primary) and -**ta** (secondary), as in **bhára-tha** pres., **abhara-ta** imperf, while Greek in all tenses has the weakened form -*τε*. But Latin has -*tis*, which may represent -*tas*, i e. *ta-si* ('thou+thou'). and Sanskrit in the dual retains a stronger form **thas**. There is therefore evidence for an original -*tas* or -*thas*, which is susceptible of either of the two explanations offered for 1 plur. -*mas* (p. 170).

The Latin imper. form *-tote*, however, and Vedic Sanskrit **-tāt**, seem to point to a doubling of the 2 pers. pronoun-stem

2 *Dual* Sanskrit **-thas** primary, **-tam** secondary. Greek *-τον* throughout, perhaps formed like *-μεν* of 1 plur (p. 169) by addition of *-ν*, or corresponding to Sanskrit **-tam**, which *may* be (as explained by Pott)=*tv-am*, *-am* being an appendage as in **aham**, **vayam** (see p. 144, and below on 3 dual).

3 *Sing* The demonstrative pronominal element *ta-* (in *τό-ν*, *οὗ-το-ς*, *is-to*, etc, see p 150) is weakened to *ti-*, Sanskrit **as-ti**, Greek *ἐσ-τί*, *τίθη-τι* (Doric) This *τι* becomes *-σι* in *τίθη-σι*, *φησί*, etc, by the usual assibilation of *τ* before *ι* (as in *πλοῦτος*, *πλούσιος*, *ἐνιαυτός*, *ἐνιαύσιος*)[1] *-σι* is also retained in a number of conjunctive forms in Homer—*ἐθέλῃσι*, *εἴπῃσι*, *πάθῃσι*, etc, and in a few used by later writers—e. g *πιμπλῇσι* Hesiod, Op 301, *ἵῃσι* Theognis, *ὑποπιμπρῇσι* Arist. Lys 348, *ὀρσῇσι* Apoll. Rhod. iii 1039 so *παραφθαίῃσι*, optat, in Il x 346.

The ordinary 3 sing termination in *-ει* is sometimes explained as arising e g. from *φέρε-σι*=original *φέρε-τι* by loss of *σ* between two vowels. But it seems better to explain it on the analogy of 2 sing in *-εις*, by one or other of the processes mentioned on p 170, *φέρε-τι* becoming *φέρειτ*, and *τ* then falling off, as an inadmissible final sound This would throw light on the original quantity of such forms as *legīt*, *regīt* in Latin, if we suppose an original *lege-ti*, *legeit*, *legīt*. In any case the final *-t* of Latin 3 sing is the secondary form of *-ti*; Latin thus retaining the inflection consistently in all tenses, while Greek has lost it from the ordinary conjugation of verbs, except in *-τω* of imper., Latin *-tō*. Oscan has *-tūd*, and Vedic Sanskrit **-tāt** (see above on 2 plural), which point to a repetition of the pronominal element [The *t* of 3 sing inflection survives as *s* or *th* in English, *he carries*, *carrieth*; as *t* in German *ist*.]

3 *Plur.*. Sanskrit -nti, -n, Greek *-ντι* (Doric), *-ν*; Latin 3 Plur. ***-nt***.

Thus, primary, **bharanti**, *φέροντι*, *ferunt*.
secondary, **abharan**, *ἔφερον*, *ferebant*.

---

[1] See above, ch. iv. p. 78.

In Greek the termination appears only in Doric *ἐντί*, *φέροντ* etc. In Attic Greek *τ* becomes *σ*, *ν* disappears, and the vowel i raised, so *φέρ-ο-ντι* becomes *φέρουσι* An old inscription o Tegea (Arcadian) gives the forms *κρίνωνσι*, *κελεύωνσι*, whic appear to be a transition stage between *-οντι* and *-ουσι* Th Lesbian dialect has *σι* with *ι* before it in place of *ν*, *φαῖσι*, *κρύπτοισι*, etc so *φορέοισι* in Theocr xxviii 11 (an Aeolic poem) Latin retains throughout the stronger form (see above, p 17).

The imperative 3 plur. in both Greek and Latin exhibits peculiar forms *φερ-ό-ντω-ν* (Doric *φερόντω*, Latin *ferunto*) seems to = Vedic Sanskrit **-ntāt** (*t* lost and *ν* added), and to correspond to Sanskrit **-ntu** of 3 plur imper The other Greek form *-τωσαν* is a later formation, unknown to Homer it is e g 3 sing *φερέτω* + *σαν* = *σαντ*, the remains of 3 plur of *ἐσμι* (*asmi*), **asanti** (p 17). This *-σαν* is also used to form a later 3 plur opt. *ἱσταίη-σαν*, and appears in its primary form in 3 plur perf act., e g *ἴσᾱσι* = *ϝιδ-σαντι*

[There is no evidence here for a formation analogous to that assumed for 1 and 2 plur, so that '*they*' = '*he* + *he* ' and all that we can say is that *-ti* probably represents the demonstrative pronoun *-ta* (as in 3 sing), and that the element *an* or *n* in some way or other may give the notion of plurality]

3 *Dual* Sanskrit has primary **-tas**, secondary **-tam**, Greek *-τον* is primary = *-ta(s)* + *ν*, *-την* secondary = **-tâm**. Thus **bhár-atas** (pres) = *φέρετον*, **ábharatâm** (imp) = *ἐφερέ-την*, *-των* of 3 dual imper also = **-tâm**, and so = *-την*

[*-tas* might be explained as = *-ta*, *-sa* (cp. *-thas* of 2 plur, p 174), *-tam may* be (as Pott) = *ta* + *am*, a pronominal appendage (see above on 2 dual)]

Middle and Passive Inflections

The name 'Middle' voice, as applied to the Conjugation of Greek Verbs, conveys no notion of the real distinction of Middle forms, viz their *reflexive* character, expressing the effect of the action of the verb upon the subject and not (as in the 'Active' forms) upon an external object The term 'Middle,' implying something between the Active and Passive Voices, would naturally suggest that these latter are the original, the

Middle a later development of language. whereas it has been established with tolerable certainty that language has generally developed the Passive from the Middle Voice in Verbs In Sanskrit, for example, we find belonging to each tense two distinct sets of verbal terminations, corresponding (as we shall see) to the Active and Middle forms of Greek, but both *active*, and sometimes applied indiscriminately to transitive verbs These are called respectively (1) '*Parasmai-pada*,' 'word[1] directed to another,' because the action passes (*parasmai*) to another object (cp the term 'transitive' from *transire*), and (2) '*Átmanē-pada*,' 'word directed to oneself,' because the action is restricted *ātmanē*, 'to oneself' (dat. sing. of *átman*, 'self') These two schemes of terminations partly answer to the 'active' and 'middle' voice of Greek Grammar. Thus, when a verb is conjugated in both *padas*, 'Átmane-pada' does not alter the idea expressed by the root, but directs the action in some way towards the agent or subject. e g **pacati**, 'he cooks,' **pacate**, 'he cooks for himself,' **namati**, 'he bends,' **namate**, 'he bends himself'

Passive verbs in Sanskrit are conjugated in Átmane-pada But while in Greek and Latin a verb in the Passive voice corresponds in form to the same verb in the Active voice, the terminations only being changed, in Sanskrit a passive verb is a separate derivative from the root (as e.g. causal desiderative or frequentative verbs are) formed on one invariable principle without any necessary connection with the conjugational structure of the active verb, but using the Átmane-pada terminations, e.g. **bhár-a-ti** (*φέρει*), **bhár-a-te** (*φέρεται*, middle), but **bhri-ya-te** (*φέρεται*, pass) by insertion of the stem suffix **ya**[2].

The evidence of the Sanskrit Verb, in addition to the obvious fact that in Latin but one form serves for Middle and Passive, while in Greek (though there are some special Passive forms) the same form serves for both in certain tenses, supports th conclusion that the original distinction is between 'Active' an 'Reflexive' terminations, but we may speak of these lat under the currently accepted terms of 'Middle' (or Medi Passive) inflections

---

[1] *Pada* = an inflected word as opposed to the uninflected root. The term refers only to a scheme of terminations, and does not necessarily carry with it the associations of 'voice' in the ordinary grammatical use of that term.

[2] See Monier Williams' 'Sanskrit Grammar,' §§ 243 *b*, 461.

The Middle or so-called 'Passive' Inflections of the Lati verb may be considered first, not as being older, but as (ac cording to one commonly received theory of their formatio exhibiting most distinctly this reflexive character This theor accounts for the characteristic *r* of passive terminations by th addition to the Active forms of the reflexive pronoun *se*, the *s* which passes by the euphonic laws of Latin into *r* Thus t take the Present Tense :—

1 Sing *amo-se, amore, amor*

2 Sing *amasi-se, amarise, amaris* (or possibly, by intro vention of a connecting vowel, from the ordinary *amas, amas-u-se, amasus, amaris* See on 3 sing and cp a form *utarus*= *utaris* on an inscription)

3 Sing *amat-u-se, amatur* (*u* being perhaps a connectin vowel)

1 Plur. *amamu(s)-se, amamur* (or ? *amamus-u-se, amamur-ure, amamur*).

2 Plur : *amamini* (sc *estis*) is really a nom plur of a participle formation analogous to Greek -μενο-, the singular of which is found in Old Latin for 2 and 3 pers. imper. *praefamino, progredimino* (i e *praefaminos sis*) The formation of *amamini* (*estis*) is therefore precisely analogous to that of the perf pass. *amatus sum, es, est*, etc The form *amaminor* (2 plur imper) given in grammars is probably due to false analogy, *r* being added as the characteristic passive sign and is supposed by some to have had no existence except with the grammarians

3 Plur.: *amant-u-se, amantur.*

So far as the Latin language is concerned this explanation might hold good, in default of a better but it is somewhat shaken by the existence in Keltic of passive forms in -*r*, which by the euphonic laws of that language could not arise from *s*. A theory which fails to satisfy the only available test of the comparative method does not rest on firm ground. and the *-r* of Latin passive forms still awaits explanation.

The Middle Inflections in Greek have more affinity with those of Sanskrit, and the explanations offered of both rest upon much less sure ground than that given of the Latin medio-passive Like the active person-endings they are capable of a primary and a secondary form (-μαι, -σαι, -ται, etc, pres. -μην, -σο, -το, etc imperf), and these are obviously formed by some increase of or addition to the corresponding active terminations But as to what the precise connection is, 'Grammatici certant et adhuc sub judice lis est' I give some of the solutions that have been proposed but the question cannot be determined with any certainty

1 That in -μαι, -σαι, -ται, etc we have a similar formation to that of the Latin Passive—viz the addition of the reflexive pronoun (*-sva*) to the pronominal elements from which the active person-endings arise This *-sva*, Greek -σϝε, -σε or -σι, would if thus suffixed give such forms as *ma-si, sa-si, ta-si, nta-si*, and the falling out of *s* between two vowels in Greek (p 66) would leave the Greek -μαι, -σαι, -ται, -νται The chief argument for this view, that it harmonises the apparently distinct formations in Latin and Greek, falls through if that of the Latin passive can no longer be regarded as even approximately certain Most comparative grammarians uphold one of the two remaining theories, viz —

2 That -μαι, -σαι, -ται, etc are formed from the active voice by Vowel Intensification (see p 53), *ai*, Sanskrit ê, being the natural raising or intensification of *i* to express a change of meaning The objection to this view is that we find Vowel Intensification employed in the formation of stems, as an agent in Word-Formation, but not in Inflection, which in all cases consists in the addition of suffixes.

3 That -μαι, -σαι, -ται, etc. are abbreviations from *ma-mi, sa-si, ta-ti*, etc, i e. that language expressed the 'reflection' of the action upon the agent by adding the pronouns *twice over* to the verbal stem, once as object case and once as nominative. Against this view it is urged (1) that, if in the doubling

of pronominal elements in the plural of active inflections (see above, p 169) both elements remained, so to speak, in the *nominative* case (e.g. *mas=ego+tu*), it is inconsistent that precisely the same phenomenon in the middle voice should give the different result of *me* (*mihi*)+*ego* [But this difficulty is less, if we bear in mind that the formation of the active inflections may have taken place at a different and much earlier stage in the development of language The same elements may have combined in different ways at different periods—in different strata or layers, so to speak, of word formation] (2) that if -μαι, -σαι, -ται are explained in this way, we ought to find similar forms in the plural (=*mas-mas, thas-thas*, etc), (3) that while the dropping out of *s* and *t* supposed by this theory in 2 and 3 pers may be justified by phonetic analogy, that of *m* in 1 pers. *ma*(*m*)*i* cannot be so justified. [It is, however, parallel to Sanskrit **bharē**=**bhar-a-mē** (*mai*) compared with φέρ-ο-μαι]

Upon the whole, this latter theory meets with most favour, being adopted by both Bopp and Schleicher, and now by Curtius, who in *Das Verbum* (p 80) retracts the opposition which he offered to it in *Tempora und Modi* We may therefore adopt it as *presumably* the correct account of the Greek middle inflections, or at any rate the best 'working hypothesis' for deducing an explanation of them, so far as such enquiries (which many philologists seem now inclined to pass by as unproductive) are an essential part of philology.

The middle Inflections of the Greek Verbs will then be as follows·—

1 *Sing.* Primary form, *ma-mi*, *mai*, Greek -μαι, Sanskrit **ē** [In Sanskrit the initial **m** disappears, and we find **bharē** =**bhar-a-mē**=φέρομαι.] Secondary *mam*, Greek -μην of imperf mid. Sanskrit has **ē** as in primary form; **abharē**=ἐφερόμην.

2 *Sing* · Primary form, *-sa-si*, *-sai*, Sanskrit **-se**. In Greek -σαι is retained in verbs in -μι and perf. tense, ἵστα-σαι, τέτυψαι (π-σαι). Epic forms like λιλαίεαι, δίζηαι (Od. xi 100), ὄρηαι (Od. xiv 343) have only lost the initial σ; -εαι being contracted into -ει, as in φέρει=φέρε(σ)αι, or into -ῃ, as in φέρῃ.

Secondary form *-sas*, *-sa*, Greek -σο, retained in imperf. of

-μι verbs (*ἐτίθεσο*) and plup tense *ἐτέτυψο* (*π-σο*). Epic forms with loss of *σ* only—*ἐμάρναο, παρίσταο, ἔθεο*, etc., cp. the forms *ὄρσο, δέξο, λέξο*, etc In ordinary Greek *ε(σ)ο* becomes *-ου*, *ἐφέρου=ἐφέρεσο* so in 2 aor. of *-μι* verbs, *ἔθου, ἔδου* and imper *θοῦ, δοῦ*.

3 *Sing* : Primary form, *-ta-ti*, *-tai*, Sanskrit **-tē**, Greek *-ται* retained throughout Secondary, *-ta-t*, **-ta**, Greek *-το* (*ἐφέρετο*, Sanskrit **a-bhara-ta**) In the imperative we find *-σθω*, a form which recalls the *-σθα* of 2 sing act, and other forms (see p 172) and the explanation of which is equally uncertain The most plausible suggestion is that it may arise from *-ττω* (representing *-τω* of 3 sing imper act doubled), *ττ* becoming *στ* by dissimilation (p 79), and then *σθ* under the influence of the spirant See however, above, on *-σθα* of 2 sing act

In the Plural terminations it is still less easy to arrive at even a plausible suggestion for their origin and for 1 and 2 plur especially, such suggestions are but guesses

1 *Plur* Greek has *-μεθα* both as primary and secondary form, with a variety in *-μεσθα*, found in Homer and later poets, but not in Attic prose, and possibly a mere phonetic variation *metri gratia*, for in a majority of cases the form *-μεθα* would not scan. Others however see in *-με-σθα* the form *-σθα* of 2 sing act, and on Curtius' view that *σθ* here arises from *tv*, *-μεσθα* would represent *ma-tva-i*. Sanskrit has for primary form **mahe**, Zend *maidē*, which points to a primary form *madhai*, secondary *-madha*, whence Greek *-μεθα*. It is suggested that *madhai=ma-tva(s)i*, *mata(s)i*=‘I+thou, to thee’ (the reflection of the action being in this case expressed by the repetition of *one* of the two elements ‘I,’ ‘thou,’ which make up the 1 plur act) This would make *-μεθα=-μεσθα*

2 *Plur.* Greek has *-σθε* both as primary and secondary form Sanskrit has **-dhvē** (primary), Vedic **-dhvai** and **-dhvam** (secondary, **m** being perhaps a later addition), a Vedic imper. in **-dhva** being found **s** often disappears in Sanskrit before **dh**: hence we may infer an original **-sdhvai**, **-sdhva**, the Greek equivalents to which would be *-σθϝαι*, *-σθϝε*. This reconciles the Sanskrit and Greek forms, and Curtius' explanation of *σθ* as

arising from ττ (above, p. 173) presumably covers **sdh** also but the origin of this termination also is uncertain A similar suggestion to that given above for 1 plur. is made, viz. that **sdhvai**, *σθϝε*=*tva-tva-(tv)i*, 'thou + thou, to thee'

3 *Plur* Sanskrit primary **-nte**, secondary **-nta**, corresponding to Greek *-νται*, *-ντο*, which in Homeric Greek are replaced by *-αται*, *-ατο*, generally after consonants and *ι*, sometimes after *υ*, *η*, *ω*, never after *α*[1]. Assuming the original form to be *an-ta-ti*, the loss of the second *t* (due perhaps to dislike of excessive alliteration) leaves *antai*, and the further loss now of *a*, now of *u*, in the syllable *an* would leave either *-ntai* or *atai* Both forms are found in Sanskrit, **-nte**, **-nta** in the first main conjugation corresponding to Greek verbs in *-ω* (**bhara-nte**, **abhara-nta**=*φέρονται*, *ἐφέροντο*), and *atē*, *ata* in the second (**chindate**, **achindata**)

According to this view the *α* of *-αται*, *-ατο* is not a substitute for *ν* (as might be thought from its occurrence after vowels in such forms as *βεβλήαται* parallel to *βέβληνται*), but an original component of the termination Practically, however, in both Sanskrit and Homeric Greek **-ntē**, **-ate**, and *-νται*, *-αται*, are separate and corresponding forms, the latter being the non-thematic ending, so that it is not incorrect to say that e g in *τετεύχαται*, *βεβλή-ατο*, the *α* 'corresponds to' the *ν* of *πείθο-νται*, *ἐγένο-ντο*.

The imperative termination *-σθων* follows the analogy of other similar forms, *-σθω-σαν* being a later formation analogous to *-τω-σαν* of imperat act (see p 176).

1 *Dual* *-μεθον* must be a by-form of 1 plur *-μεθα*, transferred perhaps by local usage, and with some reference to *-ον* of other dual forms, to the plural. An Aeolic form *-μεθεν* is also mentioned [Sanskrit has **vahe**=**vahai** (primary), and **vahi**=**vaha** (secondary)]

2 and 3 *Dual*. *-σθον*, *-σθην*, and imperat. *-σθων* obviously correspond to the act. forms *-τον*, *-την*, *-των*, as *-σθω* of 3 sing

---

[1] E g. *τετεύχαται*, *ἐρηρέδατο*, *κατακείαται*, *γενοίατο*, *εἰρύαται*, *εἰρύατο*, *βεβλήαται*, *δεδμήατο*, etc, and (with long vowel shortened before *α*—as often in New Ionic) *ἕαται*, *ἕατο*, *κέαται*, *κέατο* See Curtius, 'Das Verbum,' I. pp. 92–7 (Engl. transl. pp. 64–7).

imperat. mid. to -*τω* (see above, p. 181) In all these forms the change from *τ* to *σθ* seems to carry with it the reflexive meaning: for a possible explanation see above, p. 173, on -*σθα* of 2 sing

II. *Verb Inflection · Mood-signs.*

The function of signs of mood and their position in Verb Inflection have already been noticed (p 161) We have now to distinguish the signs for (*a*) 'Conjunctive,' (*b*) 'Optative' tenses these two groups of tenses being included under the general term 'Subjunctive (Dependent or Hypothetical) Mood,' by which the supposition of a fact or action is distinguished from its direct statement in the 'Indicative Mood'

(*a*) The special characteristic of the conjunctive forms in classical Greek and Latin appears to be a long vowel (*ω*, *η*, *ā*, *ē*) preceding the termination We find however in Homer a limited number of conjunctive forms[1], such as *ἴ-ο-μεν*, *βλή-ε-ται*, *στη-ο-μεν*, *φθί-ε-ται*, *ἄλ-ε-ται* (conj of *ἄλ-το*), in which a *short* vowel *ο*, *ε* (i e. original *ă*) denotes the modal element and the comparison of these with a conjunctive form occurring in Vedic Sanskrit (e g **han-a-ti**, indic **han-ti**, **as-a-ti**, indic **as-ti**, from **asmi**, *sum*), points to the conclusion that originally the conjunctive was distinguished from the indicative by the insertion or addition to the stem of *ă*—in precisely the same way, externally, as the indicative with a thematic vowel from the primitive indicative, so that conj **as-a-ti** : indic **as-ti** indic. **bhar-a-ti** indic **bharti**, Latin *fer-t(i)* And as there is always a possibility that formations outwardly similar may have been originally one and the same, we may perhaps consider with Curtius that the thematic vowel *ă* and the conjunctive suffix originally served the same purpose, and that as **bhara-ti**, i e 'bearer he' (see above, p. 166), developed on the one hand the meaning of 'he is a bearer,' 'he bears,' so on the other hand it might develop the meaning 'he may be, or is to be, a bearer,' 'he is intended for bearing'—i e. the force of a conjunctive. This however is speculation The facts to be considered are (1) the highly probable fact that the conjunctive suffix was originally *ă* (ο, ε), (2) the certain fact that, with a few exceptions already mentioned, it appears as *ā* (ω, η, *ā*, *ē*) Now in the ordinary conjugation of Greek verbs this long vowel seems naturally accounted for by the combination of the mood-sign with the 'thematic' vowel at the end of the stem, these two uses of the vowel *a*, whether originally identical or not, having of course become distinct with the development of verb-forms But in the conjugation of verbs in -*μι* no thematic vowel is used (p. 168–9), and here the long vowel is most plausibly explained as the result of analogy, ω, η being regarded as the characteristic mood-signs. Thus from *εἰμί=ἐσ-μί* we have in conjunctive —

---

[1] Curtius, 'Das Verbum,' II. p. 58 (Engl. transl. p. 313).

1 Sing *ἔσ-ω-μι, ἔσω, ἔω, ὦ,*
2 „ *ἔσ-η σι, ἔσῃς, ἔῃς, ᾖς,*
3 „ *ἔσ-η-τι, ἔητι, ἔησι, ἔῃ, ᾖ,*
3 Plur *ἐσ-ῶ-ντι, ἐῶντι* (Dor), *ἔωσι, ὦσι,*

following the analogy of the ordinary conjugation

In Latin, the conjunctive suffix *ā*, answering to Greek ω, η, appears in the pres. subj of 2nd, 3rd, and 4th conjugations (consonant and *ē* and *ī* stems); e g *mone-ā-m, leg-a-mus* (=*λέγ-ωμες*), *leg-a-tis* (=*λέγ-η-τε*), *audi-a-m* In *a*- stems (1st conjug) the mood sign is *ē* (*am-e-m*) and a few verbs have *ι*, e.g *sim, nolim, possim, edim, duim* but this *ē* and *ī* are both probably optative forms (see below, p 187). The imperf and plup subj. in all verbs have *ē* as mood-sign, *amar-ē-mus, regiss-e-mus.* The perfect has originally *ī*, which however (from confusion with the completed future indic) often becomes *ĭ* in dactylic poetry just as in the completed or 2nd fut indic *ĭ* is often treated as *ī* Thus we find—

Perf Subj -*erī*- *dederītis* (Ennius), *fuerīs* (Horace), *respuerīs* (Tib), *dederīs, crediderīs* (Ovid)
-*erĭ*- *egerĭmus, respexerĭs* (Virg), *dixerĭs* (Hor in hexameters *suspexerĭs*)
2nd Fut Indic -*erĭ*- *viderĭmus* (Lucretius), *dixerĭtis* (Ovid), (Virg Georg iv 59)
-*erī*- *dederītis, transierītis*, etc (Ovid), *fecerīmus* (Catullus), *dederīs, miscuerīs*, etc. (Hor in hex), *dederīs* (freq in Prop. and Ovid).

[As in Latin the conjunctive and optative coalesce into one subjunctive Mood, we might expect a mixture of conj and opt, forms such as we actually find Roby (Lat. Gr 1 § 593) suggests that the proper Latin mood-suffix was *ī* (seen in the Greek optative), which contracted with a preceding *ā* to *ē* e g. *ama-s, ama-i-s, amēs*, but as *i* suffixed to the present indic of any other than *ā* verbs would give the same form when contracted, an *ā* (seen in Greek conj) was substituted This, however, would not be true of consonant stems proper, where there was no opportunity for contraction, e g *leg-o, le-gi-m* and it would have to be supposed that the *ā* form was extended by analogy to these On the whole it seems best to admit the confusion of forms, and explain each separately, without reducing them to uniformity.]

(*b*) Optative The suffix is *ya* (retained in λέγο-ιε-ν), usually raised to *yā*, or *i* in Greek, ιε, ιη, ι The verbs in -μι retain the longer form of the suffix (ιη) in the Active Voice, the shorter (ι) in the Middle, e g —

1 Sing	διδο-ίη-ν	compared with	διδο-ί-μην
2 ,,	διδο-ίη s	,,	διδο-ῖ (σ)ο
2 ,,	διδο-ίη	,,	διδο ῖ-το
3 Plur	διδο-ῖε-ν =διδο ῖ-εντ	,,	διδο ῖ-ντο

Verbs of the ordinary conjugation have the shorter form of the suffix, which coalesces with the preceding ο (whether this be regarded as thematic vowel or an addition to the stem, assimilating all stems to *a* stems, makes no difference here) into the diphthong οι, e g φέροι-μι, τύπτο-ι-μι. In 3 plur, however (as with -μι verbs), the longer form is retained in its most primitive shape (ιε=*yă*), e. g φέρο-ιε-ν, τύπτ-ο-ιε-ν. With the longer form of suffix the secondary, with the shorter form the primary person-endings are found. 'Contracted' verbs in -ω employ both forms of the mood-sign with corresponding variety of person-endings thus from τιμάω (=τιμάο-μι) we find pres. opt τιμάο-ι-μι, τιμῷμι, and τιμαο-ίη-ν, τιμῴην

The strong (2nd) aor. opt is formed like the present opt.: e. g. δο-ίη-ν, δο-ί-μην, τύπ-ο-ι-μι, etc. (present, διδοίην, διδοίμην, τύπτοιμι).

The weak (1st) aor employs *ι* as mood-sign, retaining its characteristic stem-letter *a*, *λύσα-ι-μι*, *λυσα-ί-μην*.

The passive aor. employs *ιη* as mood-sign with secondary person-endings, *λυθε-ίη-ν*, *τυπε-ίη-ν*

Optative forms are traceable here and there in the Latin verb. Compare for example the parallel forms of pres opt from root *as* (*ες*, *es*) in Sanskrit, Greek, and Latin —

1 Sing	**s-yā-m** (=as-ya m)	*εἴην* (=*ἐσ-ίη ν*)	s iē-m (=es-ie m)	sim
2 „	**s-yā-s**	*εἴης* (=*ἐσ-ίη s*)	s-iē s (=es ie-s)	sis
3 „	**s-yā-t**	*εἴη* (=*ἐσ-ίη τ*)	s-iē-t (=es-iē-t)	sit
1 Dual	**s-yā́-va**			
2 „	**s-yā́-tam**	*εἴη-τον*, *εἶτον*		
3 „	**s-yā́-tām**	*εἰήτην*, *εἴτην*		
1 Plur	**s-yā́-ma**	*εἴημεν*, *εἶμεν*		sīmus
2 „	**s-yā́-ta**	*εἴητε*, *εἶτε*		sītis
3 „	**s-yus**	*εἶεν* (=*ἐσ-ί-εντ*)	s ie nt (=es ie-nt)	sint
		[*εἴη σαν* a later form, see p 176]		

The evident correspondence of this old Latin form *siem*, later *sim*, with the parallel optatives of the Sanskrit and Greek verbs, is irresistible evidence that in other so-called conjunctive forms in *-im*, *-is*, *-it*, we have *optative* formations Thus *velim*=*vel-ie-m*, *duim* (common in Plaut. and Ter and in old legal language, cp *Di te perduint* used by Cicero)=*daim*=*da-ie-m*, which corresponds to Greek *δο-ίη-ν*, and to a (Vedic) Sanskrit form de-yā-m[1]. So *edim* from *edo* (Hor Epod. iii 3, Sat II viii 90[2]) *temperint*, *coquint* (XII Tab).

There is also reason for supposing that the subjunctive present of *a* stems, in which *e* is the characteristic letter, is an optative form. Beside *stet* is found Oscan *sta-it*=Greek *στα-ίη-(τ)*, which points to *sta-ie-t*, *sta-ī-t*, as the origin of the Latin form. Thus *amem*=*ama-i-m*=*ama-ie-m*. cp. Umbrian *porta-ia(t)*=*portet*, and Greek *τιμα-ο-ίην*, *τιμῴην*.

The 'future indicative' of consonant-stems (3rd conjugation) in *-em*, *-es*, *-et* appears also to be an optative form, e g *dicem*

---

[1] Curtius quotes also the Vedic forms **de-yā-m** = *δο-ίη-ν*, **dhē-yā-m** = *θε-ίη-ν*, **jñē-yā-s** = *γνο-ίη-ς* 'Das Verbum,' II p 82 (Engl transl p 329)

[2] In Virg Aen xii 801, 'Ne te tantus *edit* tacitum dolor,' Ribbeck's correction, *edit*, is accepted by Conington: Forbiger, Gossrau, Heyne, Wagner, and others, retain *edat*. See Conington's note, *ad loc.*

=*deicai-m* *a* being here the vowel which in Greek appears as *ο* (see pp 36, 54), as in *φέρο-ι-μι, τύπτο-ι-μι.* Thus we have

Skt. **bhara-i-ma(s)** Gk. *φέρο-ι-μες* Lat *fera-i-mus*
bhar-ē-ma *φέροι-μεν* *ferē-mus*[1].

III *Tense-stems*

These have been briefly classified above (p 162), and we may proceed to discuss them in the order there observed

• 1. *Perfect-stem* —

The most characteristic feature of the Perfect-stem in Indo-European languages is Reduplication, i e doubling the verbal root The force of the Perfect Tense is to express *completed action;* and for this purpose language seems to have availed itself of the same means or instrument, by which (as we have noticed above, p 52) frequentative and desiderative verbs are often formed, and any strengthening of the idea of a word is expressed The earliest conceivable form would be a simple repetition of the root, with a further root indicating the subject, —*vid vid ma* The 'agglutinative' stage of language would give *vidvidma,* and the inflectional stage is marked by frequently raising the vowel of the second root and shortening the first by loss of its final letter, e g *vivaidma,* the process which is seen in so many Greek perfects, e.g *λέλοιπα* (stem *λιπ-*), *πέποιθα* (*πιθ-*), etc

It is indeed not improbable that the Perfect may have been a development from the reduplicated present with an intensive meaning It has the primary person-endings and no augment its distinctive feature, reduplication, is employed in the formation of certain present-stems, and in Vedic Sanskrit, the oldest accessible type of Indo-European language, the distinction in *meaning* between 'intensive' present and perfect is slight and fluctuating These facts certainly point to a closer connection between the present and perfect formations than appears in later developments of Indo-European speech, and perhaps indicate that the perfect, so far from necessarily implying *past* or *completed* action, was at first a reduplicated present with an intensive meaning, which became by degrees an independent member in the system of verbal forms, with a distinctive stamp of its own[1].

---

[1] The following forms are cited from Zend —*apa-barois* = *ἀποφέροις* = *au ferēs* (*ab-fera-is*), *bara-yen* = *φέρο-ιεν(τ)* = *ferēnt* (*fera-int*).

The phenomena of Homeric Greek bear out this view[2] The store of perfects in Homer is scanty as compared with Attic writers the form in *-κα* (see below, pp 193–4) is only just beginning, while the aspirated form (*-φα*) does not exist and the meaning is generally nearer that of the present than of the 'perfect' proper. Thus e g *ἔμμορε* (Od xi 337) is not 'has divided,' but 'has his share,' *εἰρύαται* (Od vi 265) not 'have saved' but 'keep safe,' *προβέβουλα* = 'I prefer,'—and so on. Many Homeric perfects again express *states* of mind or body—*κέκμηκα, ἔρριγε, ὄρωρε, σέσηπε, ἔσσυμαι, πεφυζότες*, etc , or sustained sounds, cries, etc, e g *γέγωνε, βέβρυχε, κεκληγώς* Traces of this earlier meaning survive in Attic Greek in the 'perfects with present force'—*ἕστηκα, ἔγνωκα, γέγηθα, κέκτημαι, μέμνημαι*, etc while in the New Testament, forms like *ἤλπικα, τεθαύμακα* express a state of feeling, and are often best represented by a present[3].

In the form of its perfect-stem, and by the almost universal employment of reduplication, Greek shows evidence of greater antiquity than Latin, which, as we shall see below, forms its perfect-stem in four or five different ways (by reduplication least of all). Reduplication, especially, gives to the Greek perfect-stem, in spite of differences in the mode of formation, a unity which it is vain to look for in Latin.

The reduplicated syllable.

The reduplicated syllable usually contains the initial letter of the root with the vowel *ϵ*, representing original *a*, the commonest root-vowel Apparent exceptions are due to the phonetic tendency towards easier articulation thus an aspirate is represented by a corresponding tenuis; *πέφηνα* (*φαν-*), cp. *τίθημι*, while of two initial consonants only one is repeated, and that only when it is a mute followed by *λ, μ, ν, ρ*, e. g. *γέγραφα, πέπληγα* (*πλαγ-*), *πέπνευκα* (*πνυ-*). [Exceptions are *γν, γλ*, and sometimes

---

[1] Curtius, 'Das Verbum,' II 121 (Engl transl 355)

[2] For fuller particulars, see Monro, 'Homeric Grammar,' § 28.

[3] Thus in John v 45, *ἔστιν ὁ κατηγορῶν ὑμῶν*, Μωσῆς, *εἰς ὃν ὑμεῖς ἠλπίκατε*, the appeal is to a *present* state of hope or trust: and the Authorized Version 'in whom ye *trust*' need not have been altered by the Revisers to 'on whom ye *have set* your hope.'

βλ—*ἔ-γνω-κα*, *ἐ-βλάστη-κα*: and on the other hand the stems *κτα* and *μνα* have *κέ-κτη-μαι*, *μέ-μνημαι*. In *πέπτωκα* an *ε* has fallen out between *πτ*]

In all cases but those specified, a stem beginning with two consonants has only *ε* for its reduplication,—*ἔκτονα*, *ἐζήτηκα*, etc The similarity of sound with the augment (p. 163) which is thus occasioned is, of course, purely accidental and it is incorrect to say that any verb forms its perfect 'by prefixing the augment'

Initial vowels are lengthened, as *ὀρθό-ω*, *ὤρθωκα*· but some stems with initial *α*, *ε*, *ο*, take 'Attic Reduplication,' i e either (1) doubling the whole root (*ὄδ-ωδ-α*, root *ὀδ-*), or (2) repeating the first syllable only of the root or stem (*ἀλείφω*, stem *ἀλιφ-*, *ἀλ-ήλιφ-α* , *ἐλαύνω*, *ἐλα-*, *ἐλ-ήλα-κα*). This 'Attic' Reduplication is most frequent in Homer, e g *ἀρήροται*, *ἀλάλημαι*, etc Herodotus has *ἀρ-αίρη-κα* from *αἱρέω*[1].

The forms *ἑ-άλω-κα*, *ἔ-ᾱγ-α*, *ἔ-οικ-α*, *ἐ-ώνη-μαι*, are due to the loss of an initial consonant of the respective stems (*Ϝ*) Homer has *ἐ-όλπ-α* (*Ϝελπ*), *ἔ-οργ-α* (*Ϝεργ*, our *work*) see above, ch IV. p 68

Certain verbs with initial liquid consonant have *ει* for reduplication, e g *εἴληχα*, *εἴληφα*, *εἵμαρται*

The stem vowel is sometimes strengthened—a phenomenon common to Greek, Sanskrit, Gothic and old Erse, and in harmony with the possible origin of the perfect from an intensive present (above, p 187) Cp e.g

Greek root	*φαν*,	perf.	*πέφηνα*,	with Vedic root	*tan*,	perf	**tetāna** (3 sing)
„	*λιπ*	„	*λέλοιπα*	„	*ric*	„	**rirēka**
„	*φυγ*	„	*πέφευγα*	„	*ruj*	„	**rurōja**

This vowel-intensification is an archaic procedure, confined within definite limits, and is not as a rule transferred to later forms. Curtius[2] enumerates thirty-nine perfects in which there is *complete* intensification i.e. where the short vowel of the root becomes the corresponding long vowel (only in case of a primitive *α*), as in *κεκρᾱγα* (*ἔκρᾰγον*), *τέτηκα* (*τᾰκῆναι*), *μέμηλε*

---

[1] See Curtius' 'Greek Grammar,' § 275.

[2] 'Das Verbum,' II. pp. 183 sqq. (Engl. transl. pp. 396–400).

(orig root *μαλ*), or where a diphthong appears (only where there is *ι* or *υ* in the root), as in *οἶδα* (*ϝιδ-*), *τέτευχα* (*τέτυγ-μαι*). A second group is marked by 'half intensification,' i e where *ε* of present stem becomes *ο*, as in *γέγονα*, *δέδορκα* (*δέρκομαι*), *ἔολπα* (*ἐλπίζω*), etc., twenty-four examples of which are given, with the addition of *εἴωθα*, where *ο* becomes *ω* under influence of *ϝ*, and *ἔρρωγα*, where *η* becomes *ω*.

A comparison of the conjugation of e g *οἶδα* with the corresponding forms in Sanskrit and Gothic shows a curious correspondence in what is at first sight anomalous, viz the restoration of the intensified stem to the singular number, in connection originally with certain laws of accent

Perfect in Sanskrit, Greek, and

	Sanskrit	Greek	Gothic	Latin
Stem	vid-	*ϝιδ-*	vit-	vid
1 Sing	véd-a	*ϝοῖδ-α*	vait	vidi
2 „	vḗt tha	*ϝοῖσ-θα*	vais-t	vidisti
3 „	véd-a	*ϝοῖδ-ε*	vait	vīdit
1 Dual	vid-vá		vit-u	
2 „	vid-áthus	*ϝἴσ-τον*	vit-u-ts	
3 „	vid-átus	*ϝἴσ-τον*		
1 Plur	vid-má(s)	*ϝἴσ-μεν*	vit-u-m	vid-i-mus
2 „	vid a	*ϝἴσ-τε*	vit-u-th	vīdistis
3 „	vid-ús	*ϝἴσασι* = *ϝιδ-σᾰντι*	vit-u-n	viderunt

In Sanskrit can be seen the regular working of laws of accent which required this change from sing. to dual and plural in the perfect stem. In Greek, analogy has carried the raising of the stem right through the conjugation of this tense, e g. *λέλοιπα*, *λελοίπαμεν* (for *λέ-λιπ-μες*) but the impress of the laws in question remains, as we see in *οἶδα*, *ἴσμεν*; in *ἔικτον* from *ἔ-οικ-α* (stem *εἰκ-*), *ἐπέπιθ-μεν* plup plur from *πέ-ποιθ-α* (stem *πιθ-*); and in the shortened plural forms of perf *βέβᾰμεν*, *τέθνᾰμεν*, *τέτλᾰμεν*, *ἕστᾰμεν*, *δείδῐμεν*. Latin has lost all trace of it; but it survives as above in Gothic, and in modern German *Ich weiss*, 'I know,' *Wir wissen*, 'we know.' [A similar change of quantity, inexplicable at first sight, between *δείκνῡ-μι* and *δείκνῠμεν*, *δάμνημι* and *δάμνᾰμεν*, and similar words, is illustrated by the working of the accent in Sanskrit, where exactly the same change is produced, but with greater regularity. In all these cases Greek has lost the consciousness of the original motive power for the change, retaining with uniformity of accent the results of a difference (cp **véd-a**, **vid-má** with *οἶδα*, *ἴδμεν*) These survivals, however, were but few, and the natural process of analogy brought about the complete uniformity of *λέλοιπα*, *λελοίπαμεν*]

Person-Endings of the Perfect Active

1 *sing* . *-μι* has disappeared, perhaps through loss of *-ι*, followed by that of the then isolated nasal (cp e g *πόδα*, Skt **padam**). Two perfect forms in *-μι*, however, are mentioned as having existed—*ἴσᾱ-μι* and *ϝοίδημι* (Aeolic)

2 *sing* *-θα* or *-σθα* is characteristic of this tense, and corresponds to Skt and Zend **tha**, Latin *-sti* (see above, p. 171). Greek, however, only retains it in *οἶσθα*, the fuller ending being softened into *-ς* on the analogy of the ordinary 2 sing termination in other tenses

3 *sing* *ti* has disappeared, and *a* become weakened to *ε*, as in *γέγονε* (*γεγόνα-τι*), Skt **jajāna** The Doric *ἴσᾱ-τι* (Theocr. xv. 146) survives to show the primitive form, the successive steps of decay being seen in Lat *vidit*, Skt. **véda**, Gk. *οἶδε*

1 *plur* Skt. has only the secondary ending **-ma**. but Gk. and Latin retain *-μεν* (Doric *-μες*) and *-mus* respectively

2 *plur* *-τε* as in present · a few peculiar forms only having *-θε* (perhaps from analogy of the middle *τέτυφθε*, *ἔφθαρθε*), e g. *πέποσθε* (for *πεποσ-τε*=*πεπονθ-τε*) cp the imper sing forms *ἄνωχθε* (Od xxii 437), *ἐγρήγορθε* (Il vii 371), the latter of which recalls *ἐγρήγορθαι* (infin mid), Il. x. 67.

3 *plur.* The *ᾱ* of *-ᾱσι* is usually held to indicate contraction for *-σαντι* or *-αντι*, e g *ἴσᾱσι*=*ϝιδ-σαντι* (above, p. 190), *πεποιθᾱσι*=*πεποιθα-(σ)αντι* The existence of two Homeric forms in *-ᾰσι* (*πεφύκᾰσι* Od v. 114, *λελόγχᾰσι* Od. ix 304), and elsewhere of *μεμαθήκᾰσι*, *πεφήνᾰσι* (Xenophanes), *νενεύκᾰσι* (Antimachus), and *πεπήγᾰσιν* (Empedocles), points perhaps to a primitive *-ντι* (*-ατι*)

retained as the *thematic* ending, -*σαντι* being that of *non-thematic* forms. e g.

πεποίθᾱσι=*πεποιθα-ᾰσι* (*πεποιθα-ατι*), Thematic.
γεγάᾱσι=*γεγν-σαντι*, Non-Thematic

πεφύκᾰσαι=*πεφυκ-ατι*=*πεφυκ-ντι* (as *τετευχ-αται* = *τετευχ-νται*) would then be a relic of the primitive conjugation of dual and plural perfect active described below not (as Curtius thinks) a metrical shortening of *πεφυκᾱσι*.

Primary formation of Perfect Stem In the formation of the Greek Perfect Stem we meet with a difference analogous to that between 'Non-Thematic' and 'Thematic' Present or Aorist Stems In a limited number of archaic verbs (erroneously described as 'syncopated' from the common, but later formation) the person-endings of the dual and plural indicative were attached *directly* to the stem Nineteen such verbs are enumerated by Curtius[1], some of the more familiar forms being *βεβά-ασι* (Il ii 134), *δείδι-μεν* (Il i. 230), or Attic *δέδι-μεν* (Thuc. iii 56), *εἰλήλουθ-μεν* (Il i 49, Od iii. 81) cp with *ἐληλύθα-μεν*, *ἐπέπιθ-μεν* (Il ii 341) cp with *ἐπεποίθα-μεν*, *ἕστα-μεν*, etc., *τέτλα-μεν*, etc In all except these comparatively few archaic forms the Greek perfect stem is distinguished by the final stem letter *α*.

This characteristic -*α* of Greek perfect stems (*πέποιθα*, *πεποίθα-μεν*) is not (as has been supposed) a 'connecting vowel,' but an addition to the stem analogous to the 'thematic vowel' (*ε* or *ο*); which in Greek became the rule of all perfect stem formation, with the exception of the archaic forms just mentioned It also appears in Sanskrit, but less regularly, e g. **tutōda** 1 and 3 sing., but **tutudi-ma**, **tutudi-tha**, with which it is obvious to compare, as Curtius does (II. 173, Engl. tr p 389), the Latin *tutudĭ-mus.* The perfects which exhibit this *α* thus stand to the archaic forms already mentioned as 'thematic' to 'non-thematic' forms; so that e. g. *γεγονα* (in *γεγόνα-μεν*). *γεγα-* (*γέγαμεν*) : : *ἀγο-* (*ἄγο-μεν*) : *τιθε-* (*τίθε-μεν*).

It is probable that this auxiliary *ᾰ* was originally confined to

---

'Das Verbum,' II. pp. 168–70 (Engl. transl. pp. 386–7).

1 sing. and 3 plur (primitive *-am, -ant,* Gk. *α, -ἄν*) and was gradually extended to other person-endings. The argument (for which I am indebted to Mr Monro) is as follows —

1 Sanskrit stems ending in **i, u,** take **a** before **-m** of 1 sing and **-n** of 3 plur, e g **açravam, açro-s, açrot**—3 pl **acravan**, **adarç-am,**—3 pl **adarç-an**

2 The 2 sing has no auxiliary vowel in Skt perfects, and in *ἦσ-θα, οἶσθα. οἶδα-ς* is found in Homer, and all later perfects have *α*, as *τέτληκα-ς.*

3. In the Homeric perfect and aorist in *-κα* the *α* appears regularly in sing act, occasionally in 3 plur

4 The later perfect employs *ᾰ* throughout the active, retaining the original stem in Middle *πεποίθα-μεν, πεποίθατε*, etc supplanting Homeric *πεπιθ-μεν*, etc. The Homeric perf *ἐνήκαμεν* (Od XII. 401) represents this stage

5 The aorist in *-σα* extends *α* to the Middle, and to part and infin, but forms conjunctive without it.

6 In the Alexandrian period *ᾰ* even takes the place of the Thematic Vowel (*ε* or *ο*), as in *εὑρά-μην*, etc (so possibly in Homeric *ἔειπα, ἤνεικα*)

We have thus a series of steps by which stems in *-ᾰ* supplanted older forms. The newer form in each case—at first a solecism—had generally two advantages over the established one (1) it avoided the meeting of consonants (e g in *πέ-πιθ-μεν*) and consequent phonetic decay, (2) it gave a uniform sound to connected terminations

The ordinary formation of Perfect Active in Greek may be divided into—

1. *Strong Perfect*, formed directly from the stem—*πράσσω, πέ-πρᾱγα, τίκτω* (stem *τεκ* as in *ἔ-τεκ-ον*), *τέ-τοκα, λείπω, λέ-λοιπα.* The Strong Perfect occurs almost entirely in the case of verbs whose verbal stem is a root ending in a consonant, and is generally the older and rarer form.

2. *Weak Perfect*, formed from the stem by insertion of *κ*,—*ἔσταλ-κα, κέ-κρι(ν)-κα*, the only form in use in vowel stems, and the most common with stems ending in *τ, δ, θ, μ, ν, λ, ρ.* The origin of this element *κ* is unknown: it occurs rarely in Homer

(about twenty[1] out of nearly three hundred known instances) and then only with vowel-stems and is evidently an element of stem formation, which is traceable in the isolated aorist forms ἔδωκα, ἔθηκα (cp θήκη), ἧκα, in present forms such as ὀλέ-κω; in aorists such as ἤμπλακον, ἔπτα-κον; and possibly in forms like βάκ-τρον, *bac-ulus* (root βα of βαίνω, ἔβη-ν), φῦκ-ος, *fuc-us* (φύ-ω, ἔ-φυ-ν) Curtius suggests a comparison with the Latin *fac-io*, which, if root *fa*=θε, would be a present form corresponding to ἔθηκ-α

The aspiration of the final stem consonant in forms like γέ-γραφα (γραπ-), ἐνήνοχα, εἴληφα, etc is probably a mere phonetic alteration without any definite reason It is unknown to Homer, who has e g κεκοπώς and is found in comparatively few verbs Curtius[2] enumerates thirty-seven aspirated perfects, most of them not found before Polybius. Bopp regarded these aspirated perfects as a distinct formation, a view which is sufficiently refuted by Curtius (Elucidations to Greek Grammar, § 272, pp 123–128, English Translation)

The term 'Perfect Middle' applied to e.g. γέ-γονα is erroneous A perfect Middle or Passive can only be formed in one way, viz by affixing Middle person-endings without a connecting vowel to the reduplicated stem, as λέ-λυ-μαι, τέτυμμαι=τέ-τυπ-μαι The final consonants of consonantal stems change by the laws of assimilation before the initial μ, σ, τ of the inflections, as in the table on p 195

The Perfect Middle generally exhibits a simpler form of Perfect Stem than the Perfect Active, in which (as has been shown above) intensification of the stem vowel and addition of the elements α and κ have modified the original reduplicated stem Cp e g τετύγ-μεθα with τετεύχα-μεν, the primitive form of which would be τετυγ-μεν λελάσ-μεθα (for λελᾰθ-μεθα) with λελήθα-μεν.

The *Pluperfect Middle and Passive* differs from the Perfect

---

[1] These are ἀδηκότες, βέβηκας, βεβίηκε, βεβλήκοι, βεβρωκώς, δεδάηκε, δεδειπνήκει, δέδοκε, δείδοικα, ὑπεμνήμυκε, ἕστηκας, κέκμηκας, μέμβλωκε, μέμυκεν (μύω), πεφύκᾰσι, τεθαρσήκασι, τέθνηκε, τέτληκας, τετυχηκώς, παρῴχωκε See Curtius, 'Das Verbum,' II p. 210 (Engl. transl p. 413).

[2] Ibid pp 200 201 (Engl transl. p 407).

Final Letter of Stem assimilated (See pp 74–78)	Before μ	Before σ	Before τ	Examples	
				Stem	Perf Pass Inflec
All Gutturals to	γ	κ (ξ)	κ	πλεκ-	πέ-πλεγ-μαι
				„	πέπλεξαι
				λεγ-	λέλεκ-ται
„ Dentals „	σ	rejected	σ	πιθ-	πέπεισ-μαι
				„	πέπει σαι
				„	πέπεισ-ται
„ Labials „	μ	π (ψ)	π	γραφ-	γέγραμ μαι
				„	γέγραψαι
				„	γέγραπται

only in prefixing the augment and in having the secondary Person-endings The Pluperfect Active is a composite tense and will be treated below

Latin Perfect-stem —

There are several different ways of forming the perfect-stem viz —

(i) *Reduplication*, only in about twenty-seven verbs, and with some of these only in archaic Latin (e g *te-tuli*, *te-tini*, *sci-cidi*) Of two initial consonants, the second is treated as initial, and both are retained (unlike Greek) in the reduplicated syllable, e g *ste-ti* (*sta-*), *spo-pond-i* (*spond-*)

The vowel in the reduplicated syllable often (as in Greek) sinks to *e*, especially where the root vowel is *a* or a weakening of *a*, *dedi* (*da-*), *cecini* (*can-*), *peperi* (*par-*), *cecīdi* (*caed-o*= *caid-*), *te-tuli* (root *tol*=*tal*) In compound verbs the reduplication often disappears, e g *pepuli*, *expuli*; *cucurri*, *decurri* but remains in compounds of *do*, *sto*,—*abdidi*, *abstiti* *Reppuli*, *rettuli*, *repperi*; etc (sometimes explained as the result of assimilation from *red*, the earliest form of *re*) perhaps= *re-pepuli*, *re-tetuli*, etc, *e* disappearing.

If the root syllable *a* of present sinks to *e* (or *i*) before two consonants or *r* (p. 61), *e* becomes *u* before *l* (*pepuli*, *pello*, *sepultus*, *sepelio*).

(ii.) *Raising the Stem-vowel* (without reduplication—Greek employs both), *făve-o, fāvi, ăgo, ēgi, iăcio, iēci, lĕgo, lēgi; vĭdeo, vīdi, rumpo* (stem *rŭp-*), *rūpi*, etc. Some explain the length of the root syllable in these perfects by the absorption of a reduplicated syllable i e *iēci=ieiici, lēgi=leligi,* or, where *v* is final stem consonant, by absorption of a suffixed *v* (see below, iv)· i. e *fāvi=făv-vi* But the analogy of Greek perfect-stems (above, pp 187–9) where vowel-raising and reduplication go together, perhaps points to a similar account of this formation in Latin. one part of the process is lost, but the other remains.

(iii) *Suffixing -s* (perfect in *-si*) to consonant-stems, a later form, sometimes found side by side with the older reduplicated perfect e g *punxi* (*-csi*) with *pupugi, panxi* (*pang-si*) with *pepigi, intellexi* (*leg-si*) with *lēgi* For illustrations see Roby's Latin Grammar, i §§ 670–675 The termination *-s-i* is supposed to = *es-i*, a perfect formation from the stem *-es*, and therefore analogous to the *-σα* of Greek weak (first) aorist stem Strictly speaking, this perfect is a 'weak' or composite tense, and (with the perfect in *-vi* or *-ui*, mentioned below) is sometimes classed separately under the head of 'Weak Perfect-stem,' numbers i and ii being the 'Strong Perfect-stem ' but it seems more convenient to arrange all varieties of the Perfect-stem together

(iv) Suffixing *-u* (*-ui*) to consonant-stems, or *-v* (*-vi*) to vowel-stems, as with most regular verbs in *ā, ī, amavi, au-di-vi,* ē stems with a few exceptions (*abolevi, delevi,* and *quievi*, etc. from inchoative pres *quiesco*) drop the final ē and form the perfect as though from a consonant stem, *mon(e)ui, ferb-ui,* and from some *ā-* stems are found similar forms, e g *crep-ui, cub-ui* (rarely *crepa-vi, cuba-vi*), also from pres. *-io,* infin. *-ire* (ī being dropped), *aper-ui, salui.*

The perfect form in *-vi, -ui,* is found in a considerable class of verbs with a Present-stem (see below, pp. 207, 209) increased by *n* or *sc,* e. g. *lino, livi,* or *levi, sino, si-vi; cre-sco, cre-vi* In *sternui* from *sterno, trivi* from *tero,* the stem originally consonantal becomes a vowel-stem by metathesis of the vowel and *r*. *pŏs-ui* is from *pŏs-no,* contracted, *pōno.*

In certain verbs whose stems end in *-u* (*acuo, arguo, tribuo, statu-o*, etc) the *-ui* of the perfect arises from loss of *v*, *u* being the stem-letter, e g *statui*=*statu-vi*. In some other verbs the apparent identity of perfect- and present-stem may arise from loss of reduplication (*pandi, verti*, etc).

N B The perfect-stem formed by suffixing *v* is frequently modified by the omission of *v* in all forms except 1 and 3 sing. and 1 plur of perf indic, and the contraction of the vowels thus brought together e g *amâsti, amâstis, amârunt, amâram, amâssem, amâsse* Sometimes however the vowels are not contracted after loss of *v*, e g *ie* and sometimes *ii*, as *audieram, audiero, audiisti*, as well as *audisti*, so frequently from *peto*, *eo* and their compounds

Sometimes both forms of Compound Perfect in *-si* and *-ui* are combined in one verb, e g *met-o, messui*=*met-s-ui* *nexui* =*nec-s-ui* (stem *nec-*)

The ending *-vi*, *-ui* is generally recognised as =*fu-i* the preterite of stem *fu-* (Sanskrit **bhu-** in **bhav-â-mi**=*existo, orior*, 3 sing 2 aor **a-bhū-t** Greek φύ-ω, φυ-τεύω, etc., *fu-am, futurus, fo-rem, fore*) The original *bh* represented by *f* in *fu-i*, etc (p 70), may have passed into *h*, then *hui* would easily lose its aspirate, and become *-ui* or *-vi* Whatever the process, it is evident that *vi*=*ui* and that *v* must not be considered as representing the *f* of *fui* The formation, then, of the compound perfect in *-vi* is exactly analogous to that in *-si*; a preterite form of stem *fu-* being used in one case, a preterite of stem *es-* in the other

The terminations are the same for all four classes of perfect-stems, being distinguished throughout from the Greek perfect by the characteristic vowel *ī*[1] (found in old Latin in all persons except 1 plur and often written *ei*)

---

[1] Corssen (Ueber Aussprache, etc, 1 p 609, 2nd edition) quotes from the poets, *fuīt, rediīt, vidīt, dedīt, stetīt*, and many others Lachmann, on Lucr iii 1042, instances *petiīt, abiīt, rediīt, periīt*, from various passages in Ovid, and 'Italiam fatis *petiīt* auctoribus,' from Virg Aen x 67, where however most MSS and editors read 'petiit fatis ' and goes so far as to maintain that, the final *-īt* being necessarily long, Virgil would not have shortened it, but must have written, e g in G ii 81, Aen ii 497, *exit* not *exiīt*, in Aen. v. 274 *transit* not *transiīt*. Lachmann's extreme view, how-

This ī appears as ē in 3 plur., and in old forms of 3 sing., e.g. *fuet* (Scip. Epit., see Appendix I, i 2), *dedet, ornavet, fueit, dedeit*, etc. on old inscriptions, representing an intermediate sound between ē and ī. The length of the vowel in such forms led Corssen (Ausspr. I p. 614) to connect them with a Sanskrit aorist formation characterised by **ī** [e.g. from root **vid**, 'to know,' **avēdīsham** (Ved. **aved-īm**), **avēdīshi** (**avēd-is**), **avedīt**, plur. **avedīshma, avēdishta, avēdishus.** Curtius however (Das Verbum, II. pp. 173 sqq.), points out that these forms are entirely without reduplication, which from the first connects the Latin perfect with that of Greek and Sanskrit, and refers in illustration of its characteristic ī (the only difficulty to complete identification with Greek and Sanskrit) to Indian forms which have **ī** inserted between stem and suffix, some present (e.g. **bravī-mi**, 'I speak'), some present forms from *intensives*, e.g. **dardar-ī-mi** (root **dar**, 'split'), **bōbhavī-ti** (root **bhū**, 'be'). If the perfect is originally an intensive present (above, p. 187), this **ī** may well compare with ī of Latin perfects, and the intensive form **bōbhavī-ti** would correspond exactly to *fūīt* (an old form) which=*fe-foui-t*. And in any case the occurrence of **ī** elsewhere than in aorist formations prevents it being a reason for necessarily connecting forms that exhibit it with aorists. Curtius also points (*l. c.* pp. 175–8) to traces of a stem forming *η* (or *ϵ*) in the Greek perfect, e.g. *ϝοίδη-μι* (Aeolic), the 2 and 3 sing. forms in *-ης, -η* which occur in some MSS. of Theocritus, the perf. infin. in *ϵ-ναι*, and Doric fem. participles in *-εῖα*, and, as a Latin vowel fluctuating between *e, ei*, and *i* corresponds to Greek *ϵ* (original *a*) in e.g. *ne* (*ni, nei*) cp. with *νή-ποινος*, and *sēmi-* cp. with *ἡμι-*, he contends for the analogy between *ϝοίδη-μι, ϝοίδη-σθα* and *vidī, vidī-sti*.

Another view is that the Latin perfect is formed by a suffix *-is* (*is-ti, is-tis*), with which the *ēr-* of 3 plur. (*ēr-unt=ēs-unt*) is identical, cp. also the infinitive termination *-is-se*. These

ever, is repudiated by Munro on Lucr. I c., and Conington on Aen. II 497, the former pointing out that Ovid is singular among the poets of his day in lengthening the final *-it* of perfects, which, though undoubtedly long temp. Ennius, had come to be universally shortened like so many other final sounds in Latin.

forms, it is held, point to a suffix *īs* as characteristic of the perfect indicative, whose complete forms would be

fec-īs-m(i) (later *fec-ī*),
fec-īs-ti,
fec-īs-t, („ *fecīt*),
fec-īs-mus, („ *fecimus*),
fec-īs-tis,
fec-īs o-nt=fecērunt

s in Latin not unfrequently falls out before *m* and *t*, this would account for the later forms of 1 and 3 sing , and of 1 plur also, except that here the *ĭ* is always short in poetry, and no forms in *ei* have been preserved We must therefore suppose that in 1 plur the tendency to shorten the penultima, which is seen at work in 3 plur *tulĕrunt*[1], etc , and in the forms of perf subj *dederīmus*, etc (where *ī* is the characteristic mood-sign) prevailed to such an extent at so early a period, as altogether to obscure the original quantity [In the case of 3 plur the syncopated forms *dedrot*, *dedro*, *dederunt*, on old Pisauran inscriptions[2], show the early prevalence of such a tendency]

Others (e g Schleicher, Comp § 291) suppose two forms of perfect-stem, in *īs* and in *ī*, to account for the different persons of the perf indicative The variety of possible, and more or less plausible, hypotheses only shows that for the present no final explanation has been reached , *pe-pĭg-ī*, *πέ-πηγ-α* are obviously parallel forms from a common root *păg*. We can explain the difference of quantity in the second syllable (see p 189), but at the reason of that in the final syllable we can only guess

2 ‘*Simple*’ *or* ‘*Strong*’ *Aorist-stem* [*2nd Aor*]

---

[1] Virg Ecl iv 61 (*tulĕrunt*), Aen ii 774 (*stetĕrunt*) *Miscuerunt* in Georg ii 129, iii 283, may possibly be trisyllable (*cue* by synizesis) Lucretius frequently shortens the *er*, Ennius not so often and it is probable that this quantity was a later poetical licence with perhaps some foundation in the tendencies of ordinary pronunciation

[2] These inscriptions (chiefly votive, to female divinities) are given in Wordsworth's ‘Fragments and Specimens,’ p 167 On the marks of their antiquity (not later than the Hannibalic war) see Mr Wordsworth's notes, p 408.

The Strong Aorist-stem exhibits, with few exceptions, the Pure Verbal-stem, sometimes reduplicated; e g *ἔ-λιπ-ο-ν* from *λείπω*, *ἀγαγ-εῖν* from *ἄγ-ω*. It is only formed as a rule from verbs in which the pure verbal-stem is distinct from the present-stem (enlarged), e g *λείπω*, stem *λιπ-*; *φεύγω*, stem *φυγ-*, *βάλλω*, stem *βαλ-*, and but seldom from any but 'root-verbs,' whose stems cannot be traced back further Verbs whose present-stem = pure verbal-stem, e g. *ἄρχ-ω*, *λύ-ω*, *λέγ-ω*, etc, form no strong aorist, because in these cases it would coincide with the imperfect With *ἄγω*, however, the reduplicated form *ἤγαγον* avoids this confusion and with some other verbs the change of the vowel in the pure verbal-stem forms a strong aorist distinct from the imperfect, e g *τρέπ-ω*, *ἔτραπ-ον*

Greek has two main classes of Strong Aorist forms, corresponding to the two principal conjugations, (p 168) —

(1) Without thematic-vowel, usually from vowel-stems[1], e g

Act [*ἔ-θη-ν*, *ἔ θη-ς*, *ἔ-θη*] *ἔ-θε μεν*, *ἔ-θε-τε*, *ἔ-θε-σαν* (compound)
(but *ἔβαν*)
Mid *ἐ-θέ-μην*, *ἔ-θε-σο*, *ἔ θε-το* *ἐ θέ μεθα*, *ἔ-θε-σθε*, *ἔ-θεντο*
ἔθου,

So *ἔβην*, *ἔφθην*, *ἔτλην*, *ἔγνων*, *ἑάλων*, *ἔφυν*, etc and certain Epic middle forms from consonant-stems without a connecting-vowel, e g *ἆλτο*, *δέκτο*, *λέκ-το*, *πάλ-το*, *μῖκ-το*, *ὦρτο*, *λέχ-θαι*, *ὄρ-θαι*, *δέχ-θαι* (infin); *ἆλμενος*, *ἄρμενος*, *δέγμενος*, and *ἄσ-μενος* used adjectivally (= *ἄδ-μενος*) The imperatives *λέξο*, *δέξο*, *ὄρσο* are more probably weak aorist formations (see below) *κέ-κλυ-θι*, *κέ-κλυ-τε* are examples of reduplicated forms

---

[1] The original quantity of the root-vowel in some of the forms here cited is a matter of some uncertainty In *ἐ θέ-την*, *θεῖναι*, *θέ σις*, and kindred forms, *δέ-δο-ται*, *δοῦναι*, *δο-σίς*, etc, *φά-θι*, *φα-τός*, etc, the short vowel of *θε*, *δο*, *φα*, appearing as it does in a majority of forms, is presumably the primitive root-vowel On the other hand, the Indian grammarians allow no roots in ă, but only in ā, so that Sanskrit dā answers to Greek *δο*, Latin *dăre* (but *dō num*), Sanskrit dhā to Greek *θε* and in forms like *γνῶ-ναι*, *γνω-τό-ς*, *γνῶ σις*, etc, *βιῶ-ναι*, *ἅλω-σις*, *ἁλῶ ναι*, etc, *τέ-τρω-μαι*, *ἐ-τρώ θην*, etc, the long vowel extends to the greater number if not to all the forms, and seems to be original Schleicher maintains that ă is the primitive form in all Sanskrit roots, and readers of his Compendium will find this assumption there carried out This view may or may not be correct, but we have no *data* reaching far enough back into the history of European speech to enable us to determine the question.

(ii) With thematic-vowel, as in ordinary conjugation ·—

Act	ἔ-λιπ-ο-ν,	ἔ-λιπ-ε ς,	ἔ-λιπ-ε,	and so on, as Imperfect
Mid	ἐ-λιπ ό-μην,	ἐ-λίπ-ε-σο, ἐλίπου,	ἐ λίπ-ε-το,	

To this belong most of the reduplicated forms, frequent in Homer, e g πέπιθ-ον, ἔειπον=ἐϝεϝεπ-ον (usually without augment εἶπον), ἐπέφραδον, ἠνίπαπον, ἠρύκακον Reduplication here probably does not (as in the perfect-stem) express past or completed action, for this is expressed by the augment, and the combination of the two elements would not be analogous to that found in the pluperfect We must therefore look to other uses of Reduplication, e g the expression of intensive meaning (above, p 52) Curtius ('Temp und Modi,' pp 150–164) enumerates thirty-two reduplicated aorists, in seven of which (ἤκαχον, ὦροpε, δέδαε, λέλαθον, λέλαχον, πεπαρεῖν, κεκαδών) he traces a *causative* meaning, in eleven (κέκλετο, ἠνίπαπε, ἐρύκακε, ἤπαφον, κέκλυθι, λελαβέσθαι, ἀμπεπαλών, ἐπέπληγον, τεταρπέσθαι, ἐπέφραδε, τεταγών) an *intensive* meaning, in two (πετύκοντο, πεπίθοιτο) a special *transitive* sense, while in the remaining ten (ἄλαλκον, ἤγαγον, ἤνεγκον, κεκυθῶσι, κεχάροντο, λελάκοντο, μεμάποιεν, πεφιδοίμην, ἔτετμον, ἔπεφνον) no special influence of the reduplication can be detected In his later treatise ('Das Verbum,' ii pp. 21–32) he enumerates forty-one reduplicated aorists, but is more cautious in expressing an opinion as to the exact force of the reduplication Thus he only mentions ἐκέκλετο (cf κέλετο), κέκλυθι (cf κλῦθι), ἠνίπαπε, and perhaps τεταγών (as cp with *tangere*) as examples of *intensive* force, while citing the same verbs as before for *causative* force From these Greek forms and a comparison of Sanskrit, in which reduplicated aorists are formed almost entirely from verbs of the tenth class (principally causatives), Curtius arrives at the conclusion that in the reduplicated aorist the reduplication (*Verdoppelung*) belongs not to the tense-formation but to word-formation and that its original import was to give an *intensive* or *causative* meaning, irrespective of time

Traces of an aorist formation in Latin are supposed to lie in certain old forms, e g in *tago, tagis*, an old pres. form of *tango*, mentioned by Festus (Forcell. quotes Plaut. Asin. ii. 2. 106, but the reading is doubtful) exhibiting a shorter or 'pure' verbal-stem *tag* (*θιγ*) beside present stem *tang*, in *pagunt* (XII Tab) beside present *pango*, cp *ἐ-πάγ-ην*, *πήγνυ-μι*; and in *parentes* (=*οἱ τεκ-όντες*), beside *parientes* (*οἱ τίκτ-ο-ντες*)

3 *Present-stem*

The Present-stem is (as has been already pointed out, p 160) in many cases different from the pure verbal-stem, by combination of which with the various suffixes of person, mood, and tense, all the forms of the verb may be explained. Under the heading 'Present-stem' is in fact included a series of morphologically distinct formations, each of which had originally its own special meaning (e g inchoative, intransitive, durative, passive, intensive, causative, desiderative, iterative): but in Greek and Latin, while a variety of forms remains, distinct functions have disappeared, or survive only in a few special cases (such, e g, as the forms for inchoative and desiderative verbs) By Sanskrit grammarians the special modifications of roots to form the present-stem of verbs are taken as the basis of a classification of verbs and the ten 'conjugations' of Sanskrit grammar are ten classes of verbs arranged according to the formation out of roots of verbal-bases or stems, which then receive a common scheme of terminations, in the four 'conjugational tenses' (present, imperfect, potential, and imperative) which alone are affected by the rules of stem-formation In all other tenses there is one general rule for forming the base or stem of all verbs, i e in all except the four 'conjugational tenses' all Sanskrit verbs belong to one common conjugation. For Greek and Latin Grammar, in which no such elaborate system of stem-formation and euphonic combination of stems with inflections can be traced, the most practicable classification of verbs (as of nouns) is found to be a purely phonetic classification, according to the final letter of the stem (see pp 167–9) but in the various formations of the Present-stem we have the outlines of a system akin to that of Sanskrit, which may to a certain extent be made the basis of a classification of verbs according to *stem-formation*, but without the corresponding distinctions of *meaning* which give its point to such classification

The Present-stem is, generally speaking, an *enlarged* form of the 'pure' Verbal-stem, either by strengthening this latter or making additions to it. For strengthening a root, language employs two principal means,—Reduplication, and Vowel-strengthening (see above, pp 51, 53), and to these may possibly be added a third, viz Nasalisation. The operation of these is seen in the formation of 'Intensive' Verbs in Greek, in which Reduplication is often combined with Vowel-strengthening (e g *νηνέω, παιπάλλω, ποιπνύω*) and Nasalisation (e g *παμφαίνω, βαμβαίνω, γογγύζω*, etc) The employment, separately, of these three means of stem strengthening gives us three distinct classes of Present-stem[1] and if we take first (as probably earliest in order of time) those verbs in which the Present-stem is identical with the Verbal stem, we shall thus have four classes of Present-stem, viz —

1. Verbal stem unaltered—*φή-μι, γράφ-ω, ἄγω, cado*, etc
2 " " reduplicated—*δί-δωμι, πίπ(ε)τω, bibo, sero* (=*seso*)
3 Stem vowel strengthened—*φεύγω* (*φυγ*), *λείπω* (*λιπ*) *dūco* (*dŭc*), *fīdo* (*fĭdes*)
4 Nasalisation —
    (1) By insertion—*ἐλέγχω, σφίγγω, tango, findo, fundo*, etc ,
    (2) By addition—*κάμνω* (*καμ*), *δάκνω* forms in *-νυ-μι, νη-μι*, and *-αν-ω ster-n-o, sper-n-o, sternu-o*,
    (3) By both these—*λαμβ-άν-ω* (*λαβ-*), *μανθ-άν-ω* (*μαθ-*), etc

To these may be added three more classes, viz —

5 Addition of *t* sound—*τύπτ-ω* (*τυπ-*), etc , *pecto, flecto*
6 " " *ya* (pronominal ?), which appears,
    (1) as simple *ι* sound—*μηνίω, salio*,
    (2) in a diphthong—*δαί-ω, μαίομαι, φαίνω, κτείνω*, etc
    (3) by assimilation into a double consonant
7 Addition of *sk*, Gk *σκ*, Lat *sc* (Inchoative and Iterative verbs)

Of these classes, 2, 3, 4, and 5 show a phonetic increase of the root, 6 and 7 being formed by the addition of distinct (pronominal) stems Some, however (e g Schleicher and—though less positively—Curtius in his latest work[2]) regard

---

[1] It sometimes happens that two or more of these methods are employed in forming from the same stem verbs of a kindred signification, e g *ἐρυγγάνω, ἐρεύγω—τυγχάνω, τεύχω—πυνθάνομαι, πεύθομαι—λανθάνω, λήθω*, etc , etc See Curtius, 'Tempora und Modi,' p. 81.

[2] 'Tempora und Modi,' pp 67-123, 'Das Verbum,' I pp 227-265 (Engl. transl pp. 160-186).

4 and 5 as also exhibiting an additional pronominal element (*na*, *nu* or *n*, *ta* or *t*) In the absence, however, of *data* respecting the original development of these forms we must regard this as an open question all that we can say is that, e g τυπτο (τυπτε), and δεικνυ are like ἀγο (ἀγε), fully developed, possibly nominal, stems as far back as we can trace the growth of language

The Present-stem receives in all cases the primary form of the Person-endings and under each of classes 1–4 fall Greek verbs of both principal conjugations (p 168), affixing the terminations to the stem with or without the addition of a thematic vowel, e g —

1 (Unaltered) ἄγω (ἀγ-ο-μι) and ἐσ-μί
2 (Reduplicated) πίπ(ε)τ-ω (stem πετ-) and τί θη μι
3 (Vowel raised) πείθ-ω (stem πιθ-) and εἶ μι (stem ι-).
4 (Nasalised) πιτνά-ω (stem πετ) and πετ-άν-νυ μι

Verbs of the remaining three classes (5, 6, 7) belong almost entirely to the ordinary or -ω conjugation, characterised by the thematic vowel In Latin the other or -μι conjugation is almost lost, except in isolated forms like *es-t*, *vol-t*, *fer-t*, *i-mus* and the 'thematic' or 'connecting vowel' characterises all Latin conjugation

I proceed to examine the different classes of Present-stem rather more in detail, following mainly the remarks of Curtius ('Temp. und Modi,' and 'Das Verbum,' as above).

1 Curtius ('Temp. und Modi,' p 74) suggests that among the 'unaltered' present-stems should be included verbs whose stems have undergone 'strengthening,' but in which the strengthened form has become stereotyped so to speak as the *only* existing or traceable form, and the unstrengthened form is quite obscured, e g γεύω, δεύω, ἀλείφω, ἀμείβομαι, and (with nasal) *jungo*, *prehendo*, *scando*, *incendo*. also *dūco*, *dīco*, *fīdo* (on the ground that their stem-vowel is only lengthened, not increased) He allows however that philologically these forms may be assigned to the third and fourth classes respectively: and it seems to be a needless hair-splitting not so to class them.

2. Reduplicated Present-stems are rare in Latin, which (as

we have already seen in the case of the Perfect-stem) has retained this primitive method of strengthening but little it seems that *gigno* (*gi-gen-o*), *si-sto* (=ἵ-στη-μι), *sero*=*se-so* (stem *sa-* in *sa-tum*), and *bi-bo* are the only certain examples

In Greek the vowel of the reduplicated syllable is generally ι (not ε as in perfect-stem, p 188), e g δι-δο- (δο-), ἱ-στα-=σι-στα, τι-θε (root θε-, on change to τ see p 50) ἵ-η-μι=*yi-ya-mi* · δίζημαι=διδyημαι (by assimilation, p 76) Compare also κί-χρημι (χρα), and δί-δη (Il xi. 105), δι-δέντων (Od xii 54), imperat. from a stem δί-δη (root δε- of δέ-ω), βι-βάς part pres stem βα πίμ-πλη-μι and πίμπρημι (πλα- and πρα-) introduce a nasal into the reduplication. In these forms the final vowel of present-stem is often raised in the singular only, e g δίκω-μι but δίδο-μεν, ἵη-μι but ἵε-μεν compare Sanskrit **da-dā-mi, dad-mas**, where **a** is lost

In the ordinary conjugation we have γίγ(ε)νω, πίπ(ε)τω, μίμνω =μι-μέν-ω, to which Schleicher adds ἵζω=ἵδyω (p 76)=ἱέδyω= *si-sedyo*, from root ἑδ=*sed*, see above on Latin *sīdo*. [But it would be simpler to rank ἵζω=ἵδyω in class six with suffix *ya* for even if *sīdo* be rightly explained as above, it is not necessary to assume a precisely similar development in Greek from the same root ἑδ=*sed*] Γιγνώσκω, δι-δράσκω, τιτύσκομαι, πιφαύσκω come also under class seven, being formed by addition of σκ. In the intensive forms παιπάλλω, δαιδάλλω, ποιπνύω, δειδίσκομαι, etc, the reduplicated syllable is intensified, no doubt as being the significant part of the word · but as the consciousness of the meaning conveyed by it was lost, emphasis was no longer laid on that syllable. On the contrary, it became weakened, and what was originally a formative element became merely mechanical, the intensive or frequentative or desiderative force disappearing altogether Thus μι-μέο-μαι (root *ma-*, με-, in *me-t-ior*, etc) originally='I frequently measure myself,' i e by some one, and so 'copy,' 'imitate,' has entirely lost its frequentative force Latin *imitor*, *imago* are possibly weakened forms of *mi-mi-tor*, *mi-ma-go*, formed on the same principle from the same root.

3. The vowel of the verbal-stem or root is raised irregularly

in the pres indic of some primitive verbs, e g *εἶ μι, εἶς, εἶ, εἶσι*, but *ἴμεν, ἴ-τε* (stem *ι*) *φη-μί*, stem *φα-*. The Latin stem *i-* is raised to *ī* in *īs, īt, īmus, ītis*, but *ĕo, ĕ-u-nt*

In the ordinary conjugation of Greek verbs the raising is more regular throughout the present-stem, the unstrengthened form being often visible in 2 aor (see pp 199, 200), e g *φεύγ-ω* (*φυγ-*), *λείπ-ω* (*λιπ-*), *λήθω* (*λαθ-*), *τήκω* (*τακ-*), *τρώγ-ω* (*τραγ-*), *πλώω*, the two last having the second stage of intensification (see pp 53, 54) Certain verbs in *-εω* from stems in *υ* have had the stem raised to *ευ*, but the *υ* of the stem has passed into the consonantal sound *ϝ*, and has thus been lost in present-stem (as in gen *γλυκέ-ος*=*γλυκέϝ-ος*, see p 119), remaining as *υ* before a consonant in other parts of the verb Thus *ῥέ-ω*=*ῥέϝ-ω, ῥεύ-σομαι* (stem *ῥυ-* in *ἐρρύ-ην*), compare also *πλέ-ω, χέ-ω, πνέ-ω*

Curtius arranges the verbs under this head in two divisions, (*a*) those which exhibit completed strengthening by an *addition* of vowel sound, i e *ει, ευ* from *ι, υ*, as in *ἀλείφω* (cp. *ἀλήλιφα, λιπ' ἐλαίῳ, λίπαρος*, etc), *εἴδομαι* (root *ϝιδ*), *πείθω* (*ἔ-πιθ-ον*), *κεύθω* (*κῠθε* aor, *κεκῠθωσι*), *πεύθομαι* (Homeric, cp *πυθ-έσθαι* etc); *ῥέω, χέω*=*σρέϝω, χέϝω* (cp *ἐ-ρρύη-ν, ἔ-χυ-το*, etc) (*b*) those in which the strengthening only appears in the increase of quantity of the stem-vowel, e g *α* to *ᾱ* or *η* (*α* being by its nature incapable of receiving additional vowel sound, see p. 53), as in *λήθω* (*λαθ-*), *τήκω* (*τακ-*), or *ῐ, ῠ* to *ῑ, ῡ* (instead of to *ει, ευ*), as in *ἥδομαι* (root *σϝαδ* of *ἁνδάνω*, cp *ἕᾰδ-ον*, etc), *λήθω* (*λέ-λαθ-ον*), *τρῑβ-ω* (*ἐ-τρῐβ-ην*), *φρῡγω* (*ἐ-φρῠγ-ην*)[1] This simple increase of quantity is all that is exhibited by the Latin present-stems which fall under this head—the weakness of the Latin vowel-system having all but extinguished diphthongs and made a full increase, such as from *ι, υ* to *ει, ευ*, impossible *Dīco* (root of *in-dĭc-are*, Greek *δίκ-η*) and *fīdo* (*fĭdes*) are analogous forms to *τρῑβω* (*τρῐβη*) but the change was probably much more formal and meaningless to the Romans than to the Greeks, who seem to have retained some consciousness of its purpose

---

[1] Curtius ('Das Verbum,' I pp 218–226) enumerates fifty-eight Greek verbs under this class, giving to its two subdivisions the titles 'Diphthongische' and 'Monophthongische Zulaut.'

Sanskrit exhibits the same processes as Greek. Thus—

i of root is raised to **ē=ai**. **sidh, sēdhāmi** (cp. *λιπ, λείπω*)

u „ „ „ to **ó=au** **ush, óshāmi** ('burn,' cp. *φυγ, φεύγω*)

i is not raised to **ī** as in Greek *ἴω* but **u** is sometimes raised to **ū**, e.g. **gúhāmi** ('veil,' cp. *κεύθω* and Zend *gaozaiti*).

4. The different results of the principle of Nasalisation in the formation of Present-stems may be thus arranged:—

(1) Nasal introduced into the body of the root, chiefly in Latin, e.g. *tango* (old form *tago*, pp. 199, 200), *pango* (older *pago*), *frango* (*fractus, fragor*), *fingo* (*fig-i*), *linguo, tundo, iungo* (*iugum*), etc., etc. This is common to Latin and Sanskrit [cp. e.g. **yu-ná-g-mi** 1st sing., **yu-ñ-g-más** 1 plur. with Latin *iu-n-go, iungimus* from root YUG (*iug*)], but almost unknown in Greek, *σφίγγω* (*σφιγ-μός*), *ἐλέγχω* being perhaps the only cases where it alone is employed, though it is combined with a nasal syllable in a good many stems, such as *λαμβ-άν-ω, θιγγ-άν-ω* (*λαβ-, θιγ-*), for which see below.

(2) Nasal appended to the root:—

(*a*) After vowels—*πίν-ω, τίν-ω, φθιν-ω, φθάνω, δύνω* as compared with *ἔπιον, τίω, ἔφθι-το, φθά-μενος, δύ-ω*. The roots *γεν, τεν, μεν, φεν* (in *γέ-γον-α, τόν-ος, μέ-μον-α, φόν-ος*) are perhaps nasalised forms of still older roots which appear in the forms *γέ-γα-α, τα-τός, μέ-μαα, πέ-φα-μαι*. In *κρίνω* and *κλίνω* the nasal passes into other tenses also.

(*b*) After consonants—*κάμν-ω* (*ἔ-καμ-ον*), *δάκ-νω*, and *τέμνω*, *sperno, temno, pōno=posno, posin-o* (*positus*).

(3) Addition of nasal syllables—*νε, να, νη, νυ*, and *αν*, e.g. *ἱκνέ-ομαι, κυνέ-ω, οἰχνέ-ω, κιρνά-ω, πιτ-να-ω, δεικα-νά-ο-μαι* (*κεράν νυμι, πετάν-νυμι, δείκνυ-μι*), *ζεύγνυ-μι, ῥήγ-νυμι, ὄλλυμι=ὄλνυμι σκίδνημι, κίρνημι, ἱκάν-ω, αὐξάνω, ἁμαρτάνω*, and (with inserted nasal also) *λαμβ-άνω, θιγγάνω, χανδάνω*, etc.

Schleicher (Comp. § 293) regards these nasal syllables as pronominal additions. Curtius[1], on the other hand, considers *na, nu* as primitive stem-forming syllables, 'about which little else can be said than that they are used to make other stems besides verb-stems.' Thus the formation of *ὄρ-νυ-μεν, σκίδ-να-μεν* may be compared with that of *ὕπ-νο-ς*, Lat. *som-nu-s*=*sop-nu-s*, Skt. **svap-na-s**, or Skt. **dhrishnú-s**, 'bold,' cp. with **dhrish-nó-mi**, 'I am bold' (root **dharsh**, *θάρσ-ος*), to which would correspond in Greek (did such forms exist) *θαρσ-νυ-ς, θαρσ-νυ-μι*. Noun-themes in *na, nu* seem to have had the force of 'nomina agentis' in Skt. Curtius, regarding the nasal syllable appended (2) as earlier in time to the nasal syllable inserted (1), thinks that the latter may be due to an anticipation (*Vorklingen*) of the affixed nasal. so that e.g. **λαβ-νω, *λαβ-ανω* became *λα-μ-β-άνω*, cp. the ordinary form *τύ-μ-π-ανο-ν* with the (? earlier) form *τύπ-ανο-ν* (*κροτάλων τυπάνων τ' ἰαχή* Hymn. Hom. xiv. 3)—if this latter be not a variety *metri gratia*.

---

[1] 'Das Verbum,' I. p. 157 (Engl. transl. p. 108).

5. The strengthening of the verbal-stem by addition of the dental tenuis *t* is chiefly found in Greek e.g. in two verbs only after a vowel, viz. *ἀνύτω* and *ἀρύτω* (Attic for *ἀνύω, ἀρύω*), in two after a guttural, viz. *πέκτω*, beside *πείκω* and *πέκω*, and *τίκτω* (stem *τεκ-*), and often after labials, *β* and *φ* being changed by assimilation to *π* (p. 74), e.g. *βλάπτ-ω* (*βλάβ-η*, Epic *βλάβ-εται*), *καλύπτ-ω* (*καλύβη*), *τύπτ-ω* (*ἐ-τύπ-ην*), *ἐρέπτ-ω* (later form for *ἐρέφ-ω*), *θάπτ-ω* (*τάφ-ος*), etc. The only analogous forms in Latin are *pect-o, flect-o, nect-o* (*nexui* = *nec-s-ui*), *plect-o* (*πλέκ-ω*). Schleicher regards the *t* as a pronominal stem *ta* but it is more probably a purely phonetic increase of sound, as e.g. in *πτόλις, κτείνω, πτόλεμος*, beside *πόλις, καίνω, πόλεμος*; compare *ὕπτ-ιο-ς* from stem *ὑπ-*, Latin *sup-*.

6. The insertion of *ya* between stem and person-ending, which is the characteristic of the fourth class of verbs (chiefly intransitive), and also of the passive conjugation (see p. 177) in Sanskrit, appears in many Greek and Latin verbs. The *y* sound seems to have been uncongenial to Greek organs of speech, accordingly it is, generally speaking, either vocalised into *ι* or passes by assimilation into some other sound. The forms which it assumes may be thus arranged —

(1) *y* (*j*) sound appears as a vowel

(*a*) As *ι*, in *ἰδίω* (Sanskrit **svidyāmi**, compare *ἰδρώς*=*σϝιδ-ρως*), *μην-ί-ω* (root *μαν-*), *ἐσθ-ί-ω* (Hom. *ἔσθ-ω*, strengthened from *ἔδ-ω*).

The ι is sometimes long (*μηνῖεν*, Il ii. 769: compare Aesch. Eum. 101) so that these forms should be reckoned parallel to Latin *audīre*, etc (ι=ιj, see below).

(*b*) As ε, in *δοκ-έ-ω, γαμ-έ-ω, κυρ-έ-ω* (*κύρ-ω, κύρ-σω*), *πατ-έομαι* (*ἐ-πασ-άμην, παστός*), *φιλέω* (Epic *φῖλαι* and *ἐφίλατο*), *στυγέω* (*ἔ-στυγ-ον*), the -*εω* of these verbs, which in other forms exhibit a shorter stem, being different from the -*εω* of ordinary derivative verbs (see Appendix B to ch. v pp 103, 104), though probably the distinction was forgotten.

(II) The *y* sound (vocalised into ι) appears in a diphthong

(*a*) Combined with the final vowel of a stem—*δαίω*, root **dā**, 'divide,' or du (*dah*), 'burn,' (so *ἐ-δά-η*), *μαί-ομαι* (*μά-σομαι, ἐμασάμην*), *ναίω* (*ἔνασσα*), *καίω* (Attic *κάω*, fut *καύσω*, stem *καϝ*), *κλαίω, ὀπυίω* (*ὀπύ-σω*).

(*b*) Thrown back *within* the stem and combined with its vowel (as e g in *ἀμείνων=ἀμενίων, μέλαινα=μελάνια, σώτειρα=σωτέρια*, and many others) thus *φαίνω=φάν-yω* (*ἐ-φάν-ην*), *κτείνω=κτένyω* (*ἔ-κτον-α*), *μαίνομαι* (another formation from root *μαν-*, see *μην-ί-ω* above and so with many verbs ending in -*μαινω*, derivatives from nouns in -*μα*(*τ*)=an older -*μαν*, e g. *ὀνομαίνω, δειμαίνω, θαυμαίνω*; *τεκμαίρ-ομαι* (*τέκμαρ*), *καθαίρω* (*καθαρός*), *ἱμείρω* (*ἵμερος*), *αἴρω, εἴρω*, (Latin *sero*), *φθείρω* (*ἐφθάρ-ην*), *χαίρω* (*ἐχάρ-ην*), *κρῖνω* (*κρῐν-ω*, fut.).

(III) The *y* sound passes into a double consonant by assimilation (see above, p 75)

(*a*) By pure assimilation from λ*y* to λλ, e g *ἅλλομαι* (Latin *sal-ι-o*), *στέλλω* (*ἐ-στάλ-ην*), *σφάλλω=σφάλyω* (*ἐ-σφάλ-ην*), *βάλλω* (*ἔ-βαλ-ον*), *ὀφέλλω=ὀφέλyω*, which also passes into *ὀφείλω* (II *b*, above)

(*b*) From *κy, χy, γy, τy, θy* to *σσ*, e.g *φυλάσσω* (*φυλάκ-yω*), *ταράσσω* (*ταράχ-yω*, compare *ταραχ-ή*), *ἀλλάσσω* (*ἀλλάγ-yω*, compare *ἀλλαγ-ή*), *λίσσομαι* (*λίτyο-μαι*, compare *λιτ-ή*), *κορύσσω* (*κορύθy-ω*, *κόρυθ-ος*). The process of change in these cases has already been described, ch. iv. p. 75. Full lists of forms in illustration are given by Curtius ('Das Verbum,' I. pp. 311–317). In noun forms we may compare *ἥσσων=ἥκyων* (*ἥκ-ιστος*), *ἐλάσσων*

= *ἐλάχyων* (*ἐλάχ-ιστος*), Κίλισσα = Κίλικ*yα*, *χαρίεσσα* = *χαρίεντ-yα*: the two latter showing the feminine suffix *ya*, which in *μέλαινα*, *σώτειρα*, etc, noticed above, passes back into the stem as the *i* sound of a diphthong (II *b*).

(*c*) From *δy* (and sometimes *γy*) to *ζ* e g. *ἕζομαι* (*ἕδyομαι*, root *ἑδ-* of *ἕδ-ος*, *sedes*), *ὄζω* (*ὄδ-ωδα*), *φράζω* (*πέφραδ-ον*), *σχίζω* (root *σχιδ* in *σχίδη*), *κλύζω* (*κλύδων*) also *κράζω* (=*κράγyω*, cp *κέκραγ-α*), *στάζω* (*σταγ-ών*), *ῥέζω* (*ἕρεξα*=*ἕρεγσα*, *ῥέχθεν*, etc), *ἑλελίζειν* (*ἑλελίχ-θη*).

In Latin the *i* sound remains, e g in verbs in *-io* of 3rd conjugation before *o* and *u* (*capi-o*, *capi-unt*) and the conjunctive *a* (*capi-ant*), and so-called fut. indic *e* (*capi-ent*). Where the thematic vowel becomes *i*, the two coalesce (*capis*, *capit*, *capĭmus*, *capĭtis*) We should have expected *ī* throughout. and *capīs* and *capīt* were probably the original quantities, *capĭmus* and *capĭtis* arising partly from analogy with *capĭo*, *capĭunt*, partly from the general tendency to shorten an unaccented syllable, aided by the desire to distinguish the forms from those of the 4th conjugation of derivative stems in *ī* (*audīmus*, *audītis*, etc) Other Latin verbs of this class are, e g. *jaci-o* (*jac-tus*), *fodi-o* (*fossus*=*fod-tus*), *fugi-o* (*fūg-i*), *aio*=*agy-o* (root *ag* in *ad-ag-ium*, etc., etc In *ero*=*esio*, a present formation from the root *es* (compare *ἔσομαι* for *ἐσ-σyομαι*), the *i* sound has disappeared before *o* and *u*. Assimilation analogous to that observed in Greek is possibly seen in *pello* (*πάλλω*, *pe-pul-i*)=*pel-yo*, *percello*, *tollo* (*te-tul-i*), *vello*, *fallo*, *curro*, etc But this kind of assimilation is not familiar to Latin, which e g. keeps *sali-o* beside Greek *ἅλλομαι*, *alius* beside *ἄλλος*, *medius* beside *μέσσος*, *melior* beside *μᾶλλον*; and it is possible that in these and similar forms with *ll*, *rr*, we have a doubling and so increase of the consonantal sound with the same object as that of the vowel increase in verbs of class 3 (p. 206).

[N B. In this class have been included only those verbs in which the suffix *ya* appears to have been used in the formation of the present-stem from a verbal-stem, which latter is traceable in other forms of the verb. From these must be distinguished a common formation of derivative verb-stems by the addition of the same suffix *ya* to nominal stems, in the conjugation of which the *ι* sound (or its effects) is retained throughout all tenses[1]. These are in Greek the 'contracted' verbs in *-αω*, *-εω*, *-οω* (from an original *-αyω*, *-εyω*, *-οyω* =Sanskrit **-ayāmi**, the regular termination of one class of verbs (10th) in Sanskrit) from which the *y* sound has dropped, e g *τιμάω*=*τιμάjω*, from noun-stem *τιμα-*, *φορέω*=*φορεyω*, from stem *φορε-* (*φορο-*), *ὀρθόω*=*ὀρθοy-ω*, from stem *ὀρθο-*. Corresponding formations in Latin are the ordinary 1st and 2nd conjugations, and verbs in *u-o* of the 3rd, e.g *amo*=*amao*, from *amayo*; *moneo*, from *moneyo*, *statuo*, from *statuyo* the *ā*, *ē* of the 1st and 2nd being the result of combination with the connecting-vowel, as in the contracted forms *τιμῶμεν*=*τιμά-ο-μεν*, *φοροῦμεν*= *φορέ-ο-μεν*, while in the *-uo* forms (=*-οω*), the vowels remain uncombined (*statuis*, *statui-mus*), except in the supine stem (*statūtum*=*statu-i-tum*) Greek verbs in *-ιω* (*-ι-yω*) where *ι* remains through all tense-stems, e.g *ἰδίω* (root *ἰδ*), *μηνίω*, *κονῑω* =*κονίy-ω*, seem parallel to Latin 4th conjugation forms in *-io* as compared with 3rd conjugation *cupĭo*, etc · and the long *ī* found in some of them (*κονῑω*, *μηνῑω*) shows a contraction of *ι* sound with another vowel The terminations *-αζω*, *-οζω*, *-ιζω* probably contain the suffix *ya* assimilated (see p 76) and in *-αινω*, *-ῡνω* (*λειαίνω*, *θαρσύνω*) the *ι* sound is thrown back into the stem as above in 11 *b* Latin desiderative forms in *-tur-io* are formed from nominal stems in *-tor* by addition of *ya* (*i*), e g. *partur-i-o* (*partor*), *ēsurio*=*ed-turio*]

7 The verb-forms in *-σκω*, *-sco* ('Inchoative' verbs)[2] are especially interesting because we can in this case prove a particular meaning for the additional element in the present-stem, such special meaning having (as already pointed out) been lost sight of in the other forms that have been discussed. The Inchoative (or Inceptive) meaning is obvious in many verbs both Greek and Latin (especially the latter), e.g. *γηρά-σκ-ω* (cp. *sene-sc-o*), *ἡβά-σκ-ω* (*pube-sc-o*), *ἀναβιώ-σκ-ο-μαι* (*revivi-sc-o*);

---

[1] See Appendix B to Chap v. pp. 103, 104.

[2] See Curtius, 'Elucidations,' pp. 141–144.

and can be traced in many others, e g. *μι-μνή-σκ-ω* (*re-min-i-scor*), *ἀλδ-ή-σκ-ω* (cp. *adole-sc-o*), *γι-γνώ-σκ-ω* (=*gnōsco*), and *δι-δά-σκ-ω*, 'I make to learn,' which is the correlative (with causal sense) of *di-sc-o*, 'I learn.' In other forms (e g. *βλώσκω*, *θρώσκω*, *paciscor*, *ulciscor*) there is no historical trace of the meaning. The 'Iterative' forms of imperf. and aor. in *-σκον*, common in Homer, are an isolated preterite of this formation of the present, e.g *ἔχε-σκ-ον*, *ἴδε-σκ-ον*, *μέν-ε-σκ-ον*, etc Curtius (Elucidations, pp. 142, 143) explains the connection between the two thus·—The Inchoative meaning consists essentially in the fact that the action comes to pass *gradually*, and the gradual realization (which language originally intended to denote by these present-forms) and the repetition of an action were regarded by language as nearly akin Hence these iterative forms in *-σκον* are the opposite to the sudden 'momentary' action of the aorist

The forms in *-σκω*, *-sco* are also interesting as showing the especially close connection between the Greek and Latin branches of the Indo-European family. Sanskrit has something like it in the addition to a very few verbs of chh, the regular representative of *sk* in Indian languages[1]: but there is no trace of that specific meaning of the additional element which in the two classical languages is retained to so great an extent as to give the name 'Inchoative' to the class of verbs The mode of adding the *σκ-*, *sc-*, is also very similar in the two languages 'We need only compare (*g*)*no-sc-o*, (*g*)*na-sc-or*, *cre-sc-o* with *γι-γνώ-σκ-ω*, *πι-πρά-σκ-ω*, *κι-κλή-σκ-ω*, the derivative *ἡβά-σκ-ω*, *γηρά-σκ-ω* with Latin *ira-sc-or*, *ἀλ-ί-σκ-ο-μαι*, *στερ-ί-σκ-ω* with Latin *ap-i-sc-or*, *pac-i-sc-or*, and *διδά-σκ-ω*, *λά-σκ-ω*, in which a guttural (i e. of stem *διδαχ-*, *λακ-*) is lost with *disco* (cp. *doc-eo*), to perceive that the laws of formation are the same.' Both languages unite the Inchoative element to a consonantal stem by the intervention of a thematic (connecting) vowel (*ι*, *i*, or *e*), but whether Curtius' statement 'that the genius of language, which is ever intent on delicate distinctions, has separated the Iterative forms from the Inchoatives, at least in part by the connecting (thematic) vowel,' is sufficiently borne out by the evidence, may be doubted. Language may sometimes avail itself of purely euphonic differences to express differences of meaning (as e.g. with the variations of the *a* sound, p. 36), but the thematic vowel is not purely euphonic (pp. 165, 166), nor is there any proof of its being so used here

---

[1] Thus from root **gam** (go) is formed **gachhâ-mi**; from **ish** (wish) **ichha-mi**; from **yam** (restrain) **yachhâ-mi**. These forms stand for **gaskami** etc · **chh** representing *sk*, as in **châyâ** (shade), Greek *σκιά*.

• The origin of the element *σκ-*, *sc-* is unknown.

Imperfect (Greek).

Formed from the present-stem by prefixing the augment, with secondary person-endings e g. (*a*) with connecting-vowel, *ἔ-φερ-ο-ν*, *ἔ-φερ-ες*, etc., 3 plur. *ἔ-φερ-ο-ν=ἔφεροντ* (*b*) without connecting-vowel, *ἐτίθη-ν*, *-η-s*, *-η(τ)*, (stem-vowel raised in singular), 1 plur *ἐ-τίθε-μεν*, 3 plur *ἐ-τίθε-σαν* (a compound formation, see p 176). From *εἰμί* are found two forms of imperfect, (*a*) *ἔον=ἔσ-ο-ν*, with connecting-vowel and augment omitted, (*b*) *ἦν*, *ἦ*. Sanskrit forms from the corresponding stem *as-* a 1st preterite **ās-a-m=a-as-a-m**, the vowel **a** being appended to the stem to make the inflection easier. This appears in another form of 1 sing imperf. from *εἰμί* (*ἐσ-μί*), viz. *ἦα=ἦσα* (Ionic *ἔα* without augment, as in Il iv 321, whence Attic *ἦ*), and in 3 plural *ἦσαν*=**āsant**, or *ἔσαν=erant* · *ĕrām*, *ĕrās*, &c. cannot correspond to *āsăm*, but have some analogy with the Homeric form *ἔην* The stem *ἐα=ἐσα* (with augment *ἦα= ἐ-ε(σ)α*) became in time *ἐο*, *ἐε*, the *a* adopting the analogy of the thematic vowel . hence, with the secondary termination *-ν*, *ἔο-ν*, partic *ἐών=εο-ντ*, &c. or (from *ἐε*) *ἐε-ν*, *ἦν*). Putting these forms together, we have—

1 Sing.	**āsa-m,**	*ἦα=ἦσα(μ)*,	[*ἦν* (*ἔην* Hom),	[**erā-m,**
2 „	**ās** (Vedic),		*ἦσ-θα*,	**erā-s,**
3 „	**ās-t, ās** (Ved),	*ἦε=ἦσ-ε*, *ἦε(ν)*,	*ἦν* (*ἦs* Doric),	**erā-t,**
1 Plur	**ās-ma,**		*ἦμες*,	**erā-mus,**
2 „	**ās-ta,**		*ἦτε*],	**erā-tis],**
3 „	**āsan(t),**		*ἦσαν(τ)* or *ἔσαν(τ)*=	**erānt.**

A similar formation in Latin from the stem *fu-*, i. e. *fu-am*, is generally supposed to survive in the termination *-bam* of the Latin composite imperfect (see below, p. 224). In Sanskrit the vowel **a** is *always* raised to **ā** before **m** or **v** of the person-endings (e g **bhar-ā-mi**, **bhar-ā-vas**, **bhar-ā-mas** of 1st sing. dual and plur.· but **bhara-si**, **bhara-ti**, etc. throughout the rest of the pres. indicative).

4 *The Weak or Compound Aorist* (1 aor.)

1. The function of this tense is the same as that of the Strong Aorist, viz the expression of momentary action in past time. But whereas the Strong Aorist is formed in general only from verbs which form a present-stem distinct from the pure verbal-stem (sec p 200), the Weak Aorist is formed from all verbs whose present-stem is the same as the pure verbal-stem (e.g *ἄρχω, λέγω, γράφω*), or a nominal-stem increased by *j* (e g *ἐλπίζω, φυλάσσω, τελέω*, pp. 208–210) Comparatively few verbs, e.g those with vowel-raising or dental suffix in the present-stem (above, pp 206, 208), as *πείθω, λείπω, τύπτω*, and several verbs in *-μι*, have both forms of aorist and in some cases where both forms are found, they are used to denote an intransitive or neuter, and a transitive or active meaning respectively, e g *ἔστην, ἔστησα, ἔβην, ἔβησα* Many verbs, however, along with the weak aorist form, exhibit a so-called 2 aorist pass. formed from the simple or strong aorist-stem with the addition of *ε, η* (see p 226) e g *ζεύγνυμι, ἔζευξα, ἐζύγην*: *βλάπτω, ἔβλαψα, ἐβλάβην.* In the later periods of the language the newer form, i e the weak or compound aorist, the use of which had become widely extended with verbs from which it was impossible to form a simple aorist (e g the large class of derivative verbs in *-αω, -εω, -οω, -ευω, -ιζω, -αζω, -αινω, -υνω*, etc), appears to have superseded the older form, even where the conditions for a strong aorist formation were found, e.g. *βλάπτω, ἔβλαψα*, but not *ἔβλαβον.*

2. *Formation of the Weak Aorist*[1]. The distinctive mark of

---

[1] The characteristic of this formation being the letter *σ*, it is sometimes called the 'sigmatic' aorist This element *s* (*σ*), representing the root *as* (*ἐσ-*) of the substantive verb, enters into verb formation in various ways (1) in single person-endings, such as Greek *ἔδο-σαν* (p 176), (2) in a preterite or aorist form—the 'weak' aorist in *-σα*, (3) in a perfect stem in Latin *-si* (p 196), (4) in the pluperfect of Greek and Latin, *ᾔδε-(σ)α, vide-ram* (p. 223); (5) in 'futurum exactum,' *λελύ-σομαι, solve-ro* (p 224), (6) in the Greek future in *-σω = s + ya* (p. 213), and the Latin future

this tense (besides the augment, which it shares with other forms) is *σ*, or more commonly *σα* Traces of the first are seen in the Homeric conjunctive forms with short *ο* (*ἐάσομεν*, *φυλάξομεν*, etc, which are non-thematic, the *ω*, *η* of ordinary conjunctive forms being the result of coalescence of the conjunctive mood-sign *ο* (*a*) with the 'thematic vowel' of ordinary stems, extended by analogy to non-thematic forms (*ἴωμεν* cp with the Homeric and truer form *ἴομεν*) The second formation in *σα* is common to all Greek dialects This 'sigmatic' element is generally traced to the 1st preterite of the verbal stem *as*- (**āsam**, **ās**, **āst**, see above, under head of Imperfect, p 213) added to the pure verbal-stem like an auxiliary verb, the initial *a* of *as* disappearing as in Sanskrit **(a)smas**, Latin (*e*)*sum*, and the nasal *μ* or *ν* in 1 sing falling away, as it does in acc sing *πόδα*=**pādam**, *pedem* This retention of *α* becomes characteristic of the weak aorist, as of the perfect, the only regular exceptions being 3 sing indic. act. *ἔδειξε* and 2 sing imper act. *δεῖξον* There is, however, reason to suppose that the *ă* (as in the case of the perfect, see above, p 193) was originally confined to 1 sing and 3 plur (primitive *-am*, *-ant*, Greek *ă*, *ăν*), and was gradually extended by analogy to the other person-endings, to the Middle forms, and to Infinitive and Participle; the conjunctive, however, being always formed without it

This supposed 'auxiliary' formation of the Sigmatic Aorist has much to recommend it, though the parallel sometimes adduced from Sanskrit **a-dik-sham** (**sh** euphonic for **s**) is erroneous, the corresponding Greek form to this being *ἔδιξον*. It is difficult, however, to see any essential difference between this formation and that of the perfect stem in *-κα*, and why should not *σ*, *ă* of the aorist be 'stem-forming' additions to the verbal stem, analogous to *κ*, *ă* of the perfect? *ἔ-βησ-ă* and *βέ-βηκ-ă* would then stand in precisely analogous relations to the stem as seen in *ἔ-βη-ν* and no further explanation of the *σ* would be necessary than of the *κ* (above, pp. 193, 194).

---

formations in *-so*, *-sim*, *-sere* (p. 221); (7) in the Latin subjunctive forms *lege-rem*, *lege-rim*, *legi-ssem* (p. 227); (8) in desiderative formations, e.g. Sanskrit **pipī-sha-ti**, 'he wishes to drink,' cp. Greek *δρα-σείω*, Latin *vi-so*.

The double σ common in Homeric forms may sometimes be explained by the first σ being part of the verb-stem, e g ἕσσα from ἕννυμι=ἕσνυμι, root ϝες, ἐδίκασσα, κόμισσα, and similar forms from verbs in -ζω, where the first σ is due to assimilation of final δ, δάσσασθαι=δατ-σ-, stem δατ-, and perhaps ἐτέλεσσα from stem τελες, the full form being lost in pres. τελέω It is more probable however that in this last case, and possibly in some of the others, σσ is due to the epic licence which we see in Ὀδυσσεύς beside Ὀδυσεύς, etc , and this is certainly true of the forms with double σ from vowel-stems, ἔλασσα, κοτέσσασθαι, etc.

With stems in λ, ρ, μ, ν the laws of Greek euphony did not preserve the σ of the weak aorist in contact with these consonants (except ρσ in a few Epic forms, ἔκερσε, κύρσας, φύρσω, ὦρσα, and λσ in one form ἔκελσα, which survived to later times) In Aeolic the σ was assimilated (p 74) to the stem-consonant, e g ἐνέμματο, ἔστελλαν, ἐγέννατο, ἔτεννα (cp. Homeric ὄφελλα), and possibly this may have been the older process Other dialects dropped the σ and lengthened the stem-vowel in compensation, e g. ἔνειμα=ἐνεμ-σα, ἔστειλα=ἐστελ-σα, ἐγείνατο=ἐγεν-σατο In Doric this was a pure lengthening of the vowels α, ε, e g ἔφᾱνα, stem φαν-, ἄγγηλα, stem ἀγγελ- Ionic and Attic raised α to η, and ε to ει, e g ἔφηνα, ἄγγειλα, ι and υ were simply lengthened in all dialects, e g ἔτῑλα, ἤμῡνα

The forms εἶπα, ἤνεγκα stand alone as unsigmatic forms with ᾰ, side by side with the reduplicated aorists εἶπον and ἤνεγκον The ᾰ in these forms simply represents the ε or ο of the ordinary thematic vowel, and whatever were the influences which at first led to preserving the stronger sound, the analogy of weak aorist forms like ἤγγειλα, ἔνειμα no doubt helped to perpetuate it.

The forms ἔσσευα, ἔχευα (cp ἔκηα, ἠλεύατο), for which loss of σ has sometimes been supposed, are the active forms corresponding to ἐσσύ-μην, ἐχύ-μην, the ᾰ of 1 sing. representing a primitive -ν of secondary inflection. The primitive form was thus e.g. ἐχευ-ν, ἐχευ-ς, ἐχευ(τ) . . . ἐχυμεν, ἐχυ-τε, etc., the stem-vowel being strengthened in the singular, as in some perfects (above, p. 190), and as in certain Sanskrit forms; e.g. from root vu,

arāvam, arōs, arōt plur **aru-ma**, etc ἐχεον (1 sing) became ἔχευα the ᾰ was then extended through all the persons of the active, and the old plural with unstrengthened root-vowel (ἐχυ-μεν, etc) gave way to forms on the analogy of the singular (ἐχεύα-μεν, etc)[1].

A few sigmatic aorist forms (chiefly Epic) exhibit the weaker vowels ε, ο in place of α, e.g ἀείσεο, ἄξετε (imperative), θήσετο, δύσετο, ἶξεν and ἶξον (3 pl), λέξεο, οἴσετε (imper), ὄρσεο, πελάσσετον (imper.), ἔχεσον (cp. ἔχεσα, χέσαιμι, etc) Curtius would add ἔπεσον, the so-called strong or 2nd aorist of πίπτω, which could not arise by phonetic weakening of τ from ἔ-πετ-ον (Aeol and Dor), because τ becomes σ only before ι. It must therefore, he says, = ἐπετ-σο-ν, and is to the form ἔπεσα · ἐβήσετο ἐβήσατο. Or (to compare it with ἔχεσον), ἔπεσον . πεσοῦμαι . ἐχεσον (ἐ-χεδ-σον) : χεσοῦμαι.

The vowel of all vowel-stems is lengthened before σ in the weak aorist and future, ἐποίησα, ποιήσω (ποιέ-ω), ἔλῡσα, λῡσω (λύ-ω). In derivative verbs in -αω, -εω, -οω (which all = *ayâmi* formed by suffix *ya*) the length of the vowel is natural as expressing a contraction, and from this large class of verbs it may have passed by analogy to others A few exceptions are seen in such forms as ἐκάλεσα, καλέσω, ἤροσα, ἀρόσω (from ἀρόω), ἤνεσα from αἰνέω

The conjunctive forms follow the analogy of pres. conj., σ alone marking the tense, e g λύσω, λύσῃ-s, etc, λύ-σω-μαι. In optative forms the suffix ι makes with α a diphthong—λύσα-ι-μι, etc. The 'Aeolic optative' in -σεια seems to be formed with the suffix *ya* (ιη, ιε, p 185), but with the indicative weak aorist terminations, e g λυσεία, -ας, -ε, etc., instead of λυσείην, which would be expected on analogy of τιθείην, etc. The α of weak aorist-stem in these forms has sunk to ε, but a feeling that α was characteristic of this tense led to its retention in the suffix -ια, which usually becomes ιε or ιη, though the letter there had really nothing to do with the *tense* formation.

---

[1] This very neat (and convincing) explanation is given (as Brugman's) by De Saussure, 'Mémoire sur le Système Primitif des Voyelles,' p 21.

5. *The Future Tense* (Greek).

The characteristic Greek future termination in -*σω* is not (as has by some scholars been supposed) connected with the weak aorist -*σα*, except in being perhaps originally a tense formation from the same root *as* (*ες*). From this root *as* (*ες*) language developed a present form by the addition of *ya* (see above, p. 208), viz *as-yâ-mi*=in Greek *ἐσ-σιω* (a hypothetical form), the middle of which, *ἐσιομαι*, becomes *ἔσσομαι* The suffix *ya* (*i*) is perhaps identical with the root *ι*, 'to go,' seen in *ἴ-μεν*, *i-re* and if this be so, *as-yâ-mi* or *ἐσ-ίω*='I go to be,' a natural mode of expressing future time by the addition of an auxiliary verb analogous to *je vais faire* in French, '*I am going to do*' in colloquial English, and the Latin form *datum iri* for fut. infin pass

The form -*σιω*, thus derived, has in most Greek dialects sunk (by omission of *ι*) to -*σω* Doric however preserves traces of the fuller form, sometimes with *ι*, sometimes with *ε*, following *σ* Thus on inscriptions are found *βοαθησίω*, *σπευσίω*, *πραξίομες* (*πραγ-σιο-μες*), *βοαθησίοντι*, *χαριξιόμεθα*, etc , Theocritus has future forms like *οἰσεῦμες*=*οἰσέομες* (15 133), *αὐλησεῦντι* (7 71), *ᾀσεῦμαι* (3 38), Aristophanes, employing the Doric dialect, gives forms such as *δοξεῖτε*, *ἡσεῖτε* (Ach 741, 747), *ἀγορασοῦντες* (Ach 750), and in Thuc v 79 (terms of a truce between Lacedaemonians and Argives—both Dorian) we find *ἐσσεῖται*=*ἐσσέεται*=*ἐσ-σίεται* We also, in non-Doric Greek, meet with middle forms known as 'Doric future,' e g. *ἐσσεῖται* (Hom. Il ii. 393, xiii. 317), *κλαυσούμεθα* (Ar. Pax 1081), *πλευσούμεθα* and *πλευσεῖσθαι* (Thuc i 143, viii. 1), *φευξούμεθα* (Eur Hel 500, etc) The existence of these forms indicates that in non-Doric dialects -*σιω* (-*σεω*) originally prevailed, but gave way to -*σω*

With this *ἐσίω*='I go to be,' other verbs are compounded in order to acquire a future, just as e g the perfect stem in Latin is compounded with *ero* in *cecid-ero*, *amav-ero;* the initial *ε* of the root *ες* being lost in the process as perhaps in the weak aorist formation (above, p. 215) and in Latin *sum*, so that -*σιω* becomes the normal future termination. The future of stems in *λ*, *ρ*, *μ*, *ν*, e g *τενῶ*, *φανῶ*, *μενῶ*, *νεμῶ*, *βαλῶ*, etc (which evidently arise from *-εσω*, by loss of *σ* and contraction of *-εω*, so that *μενῶ* = *μενέω* = *μενέ-σω*) show an *ε* between the stem and *σ* which is sometimes supposed to belong to the root *ες*, on which supposition there would be a distinct and older class of future forms, with the addition of the fuller form *-εσιω* to the verb-stem. The analogy however of certain Sanskrit forms, e g. tạn-i-shyā-mi = *τεν-ε-σίω* (whence *τενέ-σω*, *τενέ-ω*, *τεν-ῶ*), seems to justify the view taken in Curtius' Greek Grammar, § 262[1], that the *ε* is a phonetic insertion between the stem and the future suffix, in satisfaction of the laws of Greek euphony which (as we saw in the case of the weak aorist) did not tolerate an *σ* in close juxtaposition with λ, *μ*, *ν*, *ρ*. In the case of the weak aorist of such stems as e g *φαν-*, *σ* disappeared from the contact—*ἔ-φην-α* = *ἔφαν-σα* in the future it was retained in the first instance by the intervention of *ε* (*φαν-έ-σω*), but then disappeared in accordance with another euphonic tendency to drop *σ* between two vowels (p 66). And as in the case of the weak aorist a few exceptional (chiefly Epic) forms remain in which *σ* survives in contact with *ρ* and λ, so in the future we find exceptional (chiefly Epic) forms like *κέρσω*, *κύρσω*, *θέρσομαι*, and *κέλσω*, which show the shortened form in *-σω* = *-σιω*, and that at quite an early stage of the language. Other futures which show traces of this *ε* between the stem and the future-ending are *ἑδοῦμαι* = *ἐδέ-σομαι*, *πεσοῦμαι* = *πεσ-έ-σομαι*, *μαχοῦμαι*, Epic *μαχέσομαι*, *μαχέσσομαι*

σ has similarly been lost and the vowels contracted in *βιβῶ* (= *βιβάσω*, *βιβάω*), *ἐλῶ*, *δαμῶ*, the so-called 'Attic futures[2].'

---

[1] Curtius now inclines ('Das Verbum,' II p 306) to the supposition of a double series of stem-forms, e g *man*, *mana*, whence *μεν-* of aorist *ἔμεινα* = *ἔ μεν-σα*, *μενε-* of future *μενῶ* = *μενε (σ)ω* The i of Sanskrit tani-shya-mi would thus be a weakening of a in the stem-form tana-, corresponding to *τενε-* of Greek *τενε(σ)ω* = *τενεσιω* He allows that in the Greek examples the vowel has *become* a merely phonetic adjunct and it is apparently for the sake of consistency with his present views about the 'thematic vowel' in ordinary conjugation (p 166) that he is now unwilling to regard it as *originally* phonetic Whether, however, it is necessary to strain after such consistency, in face of other undoubted examples of purely phonetic insertion of a vowel (p. 83), may be doubted.

[2] Other examples of 'Attic future' are *δικᾶν* (Hdt. i. 97) = *δικάσειν*, *κολᾷ* (Ar. Eq 456) = *κολάσει*, *πελῶ* (Aesch. P. V. 282, cp. *πελάσω*, Eur. El,

σ has been lost without contraction in the Homeric forms *ἀνύω* (Il. iv 56), *ἐρύω* (xi. 454), *τανύω* (Od. xxi 174). These forms have become like present-forms by loss of *σ*, but there are others which really are present formations to which a future meaning has attached, notably *εἶ-μι*, *ibo*.

Future (Latin).

Here we find two distinct forms 1 a modified form of pres subj (with consonant and *i*- or *u*- stems) which like *sim*, etc. (see p. 186) is probably an optative form. With *a*- and *e*- stems however this form, if used for the future, would lead to confusion with pres subj in the one case (*amemus*), with pres indic in the other (*monemus*), and with these verbs, accordingly, we find another form, *ama-bo*, *mone-bo* A similar future in *-bo* (besides the more usual form in *-am*, *-es*, *-et*) is found from *ī* stems in earlier writers (Plautus, Terence, etc), e.g *aperibo*, *adgredibor*, *scibo*, etc., but none of these forms survived in use in the 1st century B C except *ibo*, *quibo*, *nequibo* Propertius has *lenibo*, and we find *veniet* for the more usual *venibit* (future of *veneo*=*venum eo*) in the Lex Thoria, 112 B C, and *exiet* in Seneca. [*Pulchrior exiet* in Hor Od iv 4 65, though accepted by Orelli, has very little MS authority, and *evenit* is probably correct] *Dicebo*, *fidebo* are also quoted from old Latin

This termination *-bo*, like *-bam* of the imperfect and *-ui*, *-vi* of perfect (see p. 196), is generally supposed to be a tense-form of the stem *fu*-, 'to be,' whence *fui*, *fore*, etc Opinions however differ as to what precise tense-form it represents, two explanations being given:—

1. *-bo*=*fu-o*, a present formation thus *ama-bo* would be analogous to 'I *am* to love.'

2 *-bo*=*bu-i-o*, *fu-i-o*, a form analogous to *ἐσίω*, *esio*, *ero*, and='I go to be' (see above, p 218) This latter is more generally adopted, perhaps on account of the close analogy which it presumes between Greek and Latin in the formation

---

1332), *ἀποσκεδῶ* (Soph O T 138), *γαμεῖ* (Aesch. P V 764, etc), *καθεδοῦμαι* (Ar. Ran 200), and many futures in *-ιῶ*, *-ιοῦμαι* from *ι* stems The term 'Attic future,' applied by old grammarians, is really incorrect, many of the forms in question being found in Homer; while in some verbs (e.g. *δικάζω*) the Attic dialect invariably retains the *σ*.

of the future, Greek taking one form of auxiliary (*εσ-*), Latin the other (*fu-*).

Was this future in *-bo* the original form of all futures in Latin? Curtius ('Temp und Modi,' p 324) thinks not, because it is contrary to all analogy that language should proceed from a compound to a simpler form The most primitive usage, he thinks, was to employ the optative form (*dicem, faciem*) as future the form in *-bo* being a later form, and as such applied mainly to the derivative verbs of 1st, 2nd, and 4th conjugations, and but little to consonantal stems Forms therefore like *sugebo*, *dicebo, vivebo* (which are very few in number), are not relics of an earlier formation for consonantal stems, but anomalous later forms on the analogy of *a-* and *e-* verbs.

The ordinary 'futurum exactum' or 'Completed Future' (*amav-ero, cecid-ero*, etc) is, as has already been noticed (p. 218), a compound form, the future (or pres with fut. signification) of stem *es-*, i e *ero*=*esio*, being added to the perfect-stem, the characteristic *i* of which vanishes, *amav-ero, scrips-ero, tetig-ero, ded-ero*, etc

In the older language of Plautus, old laws, and formularies, etc, is found a series of future forms with characteristic *s*, viz indic *-so* or *-sso* (*facso, amasso*, etc), subj *-sim* or *-ssim* (*faxim, ausim, locassim*), infin. *-sere* or *-ssere* (*reconciliassere*, Plaut), pass indic. *-sĭtur* or *-ssĭtur* (*mercassitur*, Lex Thoria, *jussitur*, Cato; *faxitur*). A number of other examples are given in Roby's Latin Grammar, i. §§ 619, 620. but almost the only forms which survived after Terence are *faxo, faxis, ausim, ausis* Terence has besides *excessis* (And iv. 4. 21) and *appellassis* (Phorm. v. i. 15), Lucretius has *cohibessit* (iii. 444); Cicero, *di faxint*, Catullus, *recepso* (xliv 19) and *tepefaxit* (lxviii 29); Virgil, *jusso* (Aen. xi. 467). Two explanations of these forms are given:—

1. On the analogy of *amassem, amasse, consuessem*, etc., and other forms acknowledged as syncopated (*dixti, extruxem, consumpse*, etc., see Wordsworth's Introd. xviii. 12, p. 149), these forms are regarded as formed by the addition to the *perfect*-stem of *-so*=*-ro* of the ordinary 'futurum exactum,' the *ĭ* pre-

ceding this *-ro* (*amavĕro*) being on this view regarded as the *i* of perfect-stem shortened to *ĕ*, as abl *-ī* to *-ĕ* (p. 125). Thus *amasso* = *amavi-so* = *amave-so* = *amavero* [Schleicher in fact classes the forms in *-so* under the head of 'futurum exactum,' of which he distinguishes (*a*) the shorter and older form *-so* added to pure verbal-stem, (*b*) the longer and later form in which *-so* is added to the perfect-stem, including the ordinary forms *amavero*, etc., and the syncopated forms *amasso*, etc.] To this view two objections are made. (1) that it does not account for forms like *cap-so*, *rap-so*, *faxo* (*fac-so*), *prohibesso*, etc., where the *present-* and not the perfect-stem seems to be employed, (2) that it does not properly account for the double *s*, the view that this *ss* is a compensation for the loss of *v* or *ui* being not only conjectural, but contrary to the analogy of other contracted forms *Amaveso*, by loss of *v*, would more naturally become *amaeso*, *amāso*, *amāro;* or if it did become *amavso*, it would contract to *amauso* or *amūso* (cp *amāram* = *amaveram*, *nauta* = *navita*, *aetas* = *aevitas*, etc.). Accordingly others explain these forms as—

2. Formed from the *present*-stem, like the Greek future in -σω -*so*, -*sim*, -*sere* being respectively a future indicative, subjunctive, and infinitive, formed by the addition of *s* to the stem; a final *ĭ* or sometimes *e* of the stem being dropped, as in *fac-so* (*faxo*) from stem *facĭ;* *sponso* (*spondso*) from stem *sponde;* *ausim* (*aud-sim*) from stem *aude.* Other *e-* stems preserve the vowel, *prohibe-ssit*, *cohibe-ssit*, etc. The double *s* in these forms and those from *a-* stems may possibly be due to a mistaken analogy from the forms *amasse*, *consuessem*, etc., for *amavisse*, *consuevissem*, etc: or it may have been a mode of marking the accent, or of preserving by additional stress the characteristic *s*; a single *s* between two vowels, as we have seen (above, p 66), being very rare and almost always changed to *r* It may be, therefore, that in pronunciation of these forms the desire to retain what was characteristic of meaning, viz. *s*, struggled against the phonetic tendency to resolve *s* into *r*; and that the success of this effort affected orthography in the *ss* of the forms in question.

The objection urged to this explanation is the difficulty of regarding *ss* as merely the result of accent in pronunciation; a view which has already been set aside in the explanation of the superlative termination *-issimus* (see above, p 134). but upon the whole the difficulty appears less than those which attend the other explanation.

[N B The verbs *arcesso, capesso, facesso, lacesso* are probably similar formations, originally future, from *arcio* (=*ad-cio*, see p 65), *capio, facio, lacio;* but they have been treated as present-stems, and so received fresh inflections of tense and mood Similarly *incesso* (=*inced-so*, p 75) is formed from *incedo* and *petesso* or *petisso* (Cicero, Tuscul II xxvi 62; Lucretius, iii 648, v 810) is probably a like form from *peto*]

6 *Tenses formed from the Perfect-stem* (Pluperfect, etc).

(*a*) *Greek Pluperfect* A preterite of aorist form from the root *εσ-* (*ἔσ-αμ, ἔσα-ς*, etc) is added to the perfect-stem, the augment being prefixed Thus from *πείθω*, perfect-stem *πέποιθ-*, we have pluperfect *ἐ-πεποίθ-εσα(μ)*, whence Epic *ἐπεποίθεα*, contracted naturally into *ἐπεποίθη*, which is found in old Attic, *-ν* being added as secondary form of 1 pers. inflection In 3 sing however *a* became *ε*, *ἐπεποίθ-εσε(τ)*, *ἐπεποίθεε*, and the natural contraction was to *ει* in *ἐπεποίθει* This *ει* having become usual in 3 sing was transferred in late Greek by a false analogy to 1 plur and dual (*ἐπεποιθέσαμες, ἐπεποιθέαμες, ἐπεποίθημες*), giving e g. *-ειμεν* as its termination, and then to 1 sing, giving *-ειν* instead of *-η* the extreme point of confusion being reached when in 3 plur., where alone the full form was retained [*ἐπεποίθεσαν(τ)*] and there was never any contraction, the *ει* representing a contraction was introduced, giving *-εισαν* as the termination. But this *-εισαν* of 3 plur, though always given by grammars, is rarely found in the best MSS. of Greek authors: and many good MSS of Plato and Thucydides give in 1 sing. *-ην*, not the later and incorrect form *-ειν*.

(*b*) *Latin Pluperfect.* Here *-eram, -as, -at*, etc. added to the perfect stem is obviously a corresponding formation to Greek *ἔσα(μ)*; Latin retaining fuller forms in 1 sing. and 3 plur.

Compare e g. *ᾔδεα*=*ᾔδεσα*, the older form of *ᾔδειν*, with Latin *videram*, the pluperfect form of *vidi*=*ϝοιδα*·—

vīd-eram	*ἐ-ϝείδ-ε(σ)α*	*ᾔδεα*
vīd-eras	*ἐ-ϝείδ-ε(σ)ας*	
vīd-erat	*ἐ-ϝείδ-ε(σ)ε*	*ᾔδεε*
vīd-eramus	*ἐ-ϝειδ-έ(σ)ἄμες*	
vīd-eratis	*ἐ-ϝειδ-έ(σ)ἄτε*	*ᾐδέατε*
vīd-erant	*ἐ-ϝείδ-εσαν*	*ᾔδεσαν.*

Except that the Greek pluperfect has the augment, the two are identical throughout

(*c*) '*Futurum exactum*' (Greek), by the addition of *σ* (see above, p. 218) to the lengthened perfect-stem in active voice *τεθνήξω* (-*κσω*), *ἑστήξω* , to the perfect-stem in the middle forms *λελύ-σομαι*, *πεπράξ-ομαι*=*πεπράγ-σομαι*, *γεγάψ-ομαι*, etc

(*d*) '*Futurum exactum*' (Latin), by addition of *er-o*, etc to perfect-stem (see above, p. 218)

7. *Imperfect Tense* (Latin)

The imperfect in *-bam*, like the future in *-bo*, appears to be an exclusively Italian formation, found in all Latin verbs except *sum*, and supposed to be formed from the parallel root *fu-* as *eram* from *es*. *Fu-am*, then, is the original of *-bam;* the process of change being according to some the loss of *u* and change of *f* to *b*, *-fuam*, *-fam*, *-bam*, according to others, loss of *f* and hardening of the *u* (consonantal=*w*) to *b*, *-fuam*, *-uam*, *-bam* This termination *-bam*, *-bas*, etc. is added directly to most pure vowel-stems, e. g *dă-bam*, *sta-bam*, *qui-bam*, *i-bam*, and to derived vowel-stems in *-a*, *-e* (*ama-bam*, *mone-bam*) but with derived verbs in *ī* (4th conjug) and consonantal stems a long vowel is inserted between the stem and the termination, e. g *audi-ē-bam*, *reg-ē-bam* In old Latin poetry this *ē* is often not found with *ī* stems, e. g *ai-bam*, *sci-bam* (Plaut., Ter., Lucr., Catull.), *servi-bas* (Plaut.); *insani-bas* (Ter.), *saevi-bat* (Lucr. v. 1003), etc.; and so in later poetry—*audi-bant* (Catullus, lxxxiv. 8); *largi-bar* (Prop. i. 3. 25); *leni-bant* Virg. Aen. iv. 528), *nutri-bant* (vii. 485), *redimi-bat* (x. 538), etc. These instances are chiefly poetical, and the probability is that *-ībam* is not an original form, but a contraction for *-iebam :* and further, that for all derived verbs the form was originally *-ē-bam*, but that with *a-* and *e-* stems it coalesced with the stem-vowel (*mone-e-bam*, *monē-bam*) The origin of this *ē* is doubtful some explain it as the lengthening of the ordinary connecting-vowel others as being merely transferred from the derived verbs in *ē-*, by false analogy, to the 3rd and 4th conjugations, others (e g Bopp) as part of the suffix *-aya*, which enters into the formation of derived verbs in *ā-*, *ē-*, *ī-* (p 211), and therefore confined in the first instance to these derived verbs In support of this latter view it is urged that the parallel future form in *-bo* is general with some derived verbs (in *ā-* and *ē-*, 1st and 2nd conjugation), not unfrequent in others (*ī-* stems), and very rare in consonantal stems If this view be correct, the *ē* with consonant verbs *reg-e-bam*, etc will be the result of false analogy from the vowel or derived stems in *a-*, *e-*, *i-* Another suggestion, that in the long *ē* we have the effect of a stem-vowel coalescing with the augment prefixed to the auxiliary (*ĕ-bam*), contradicts all analogy, not only of the Latin language, which exhibits no trace of having used the augment, but also of the Greek, where in compound tenses the augment always leaves the auxiliary and takes its place at the beginning of the whole compound, e g *ἔλυσα*, not *λύ-εσα*: so too in Sanskrit, **a-dik-sham**, not **dik-a-sam**

The original quantity of *ā* in the termination *-bām* is preserved throughout, except in 3 sing, which was shortened (as *amat*, *monet*, *regit*, etc, see p 175) in dactylic verse, from Ennius downwards, the old quantity being seen in Enn. Ann 141,—

'Noenum rumores ponebat ante salutem'

In Virg G iv. 137, Aen v 853 ('tondebāt,' 'amittebāt') a short syllable is artificially lengthened.

8. *Aorist Passive* (Greek).

The two passive aorist-stems in the Greek verb are distinguished from other passive forms by *active* person-endings: whence it seems probable that their passive meaning lies in the stems themselves, i. e. in the elements *ε* (*η*) and *θε* (*θη*) appended to the verb-stem. The precise connection, however, of these elements with the meaning in question is matter of coniecture.

(1) For the 'strong' 2nd aorist-stem ε (η) is added to the root, and treated as a root-vowel, the augment being prefixed. Thus from root φαν- is formed the aorist stem ἐ-φανε, indic ἐ-φάνη-ν, imper φάνη-θι, conj φανέ-ω, φανῶ, opt φανε-ίη-ν η has usually been regarded as a raising (*Steigerung*) of ε; but some regard η as the original form, and ε a shortening from it. The origin of ε (η) is uncertain. Curtius ('Temp und Modi,' pp 329–30) suggested that it arose from the root *ya*='to go,' which in Sanskrit is employed in the formation of passive verbs (cp *venum eo* or *veneo*=passive of *venum do* or *vendo*), and which e g in ἵημι has a causative force='I make to go' But this is only a conjecture and it is equally probable that ε is an increase of the stem, such as is found e g in the derived verbs, whose stems are sometimes treated as if their final letter were the final letter of the root itself, compare Aeolic φίλη-μι This, in fact, is Curtius' present view ('Das Verbum,' ii p 322)

(2) The 'weak' or 1st aorist-stem is distinguished from the other by θ between the verb-stem and ε (η) We may say either that ε (η) is appended to the verb-stem increased by θ (instead of to the pure verbal-stem as in 2 aor), or, more probably, that θε (θη) is appended to the pure verbal-stem, analysing e g ἐπράχθην (stem πραγ-) into ἐπράχ-θη-ν The form probably stands in more or less close connection with numerous other formations in which the same consonant θ appears[1]: e g the present-stems τελέθω, φθινύθω, μινύθω, πρήθω (stem πρα- of πίμπρημι), πλήθω (πλα-), ἔσθω (Epic)=ἔδ-θω (by dissimilation, see p 79), from which with a further suffix ιε=*ya* is formed the present-stem ἐσθιε in ἐσθίω, or the preterites ἔσχε-θ-ον, ἠμύνα-θ-ον, ἠγερέ-θ-οντο, etc This θη is possibly identical with the root θε (*dha*)='to place,' used in the sense of 'to do' or 'make,' with the same force originally, in composition with other verbal stems, as our English auxiliary verb *did* in such expressions as *he did come* If this be so, the formation would be originally active how it comes to have a passive meaning is an unsolved difficulty. Sanskrit has a compound verbal stem çrad-dha, 'to believe,'

---

[1] A full list of these is given by Curtius, 'Das Verbum,' ii pp. 340–345 (Engl. transl. pp. 501–504).

from which is formed a present **çrad-dadhāmi**, i e **çrad** or **çrath**=‘trust,’ ‘belief,’ and **da-dhāmi**=*τί-θη-μι*. To this corresponds the Latin *crēdo*=*cred-do* (cp *condo*, *per-do*, etc), this and similar forms representing *dha* of **da-dhā-mi**, *τί-θη-μι*, as *da-* in *dare* represents *δο-* *da-* of *δίδωμι*, **da-dāmi**. and English *do*, *did* is from the same root Thus in *ἔ-θη-ν*, *ἐ-πράχ-θη-ν*, *cre-do*, and English *do*, *did* we have one and the same element.

(3) From these two aorist passive-stems are formed two futures by the addition of the ordinary future termination (see p 218) with middle person-endings, *φανή-σομαι*, *λυθή-σομαι*. They are apparently late formations, in Homeric Greek the weak aorist in *-θησομαι* does not occur at all, the strong aorist only in *μιγήσεσθαι* (Il. x 365).

9 *Tenses of the Conjunctive Mood in Latin*

(1) The *Present* Conjunctive has been explained above, pp 184–186

(2) *Imperfect* Conjunctive. The *-rem* which in 1st, 2nd, and 4th conjugations is added directly to the present-stem, and in 3rd conjugation apparently with a connecting vowel *e* (*ama-rem*, *mone-rem*, *audi-rem*, *dic-e-rem*), probably=*-sem*, i. e *-erem* or *-esem*, an optative form of *eram*, *esam* analogous to *amem* Thus in 1 plur *eremus*, *eramus*, *amemus*, *amamus*. This *-erem* (*-esem*) therefore originally=*esa-i-m* (see above, p 186). For the double *s* in *essem*, the ordinary imp subj. of *sum*, different explanations have been suggested. Pott, followed apparently by Roby (Latin Grammar, § 609), makes *essem*=*es-sem*, the first *s* belonging to the stem, the second to the suffix *-sem* (*-rem*) But in the plup. subj. *fecissem* evidently=*feci*+*-sem*, and the two forms can hardly be treated differently. moreover we have traces in Old Latin of both forms with a single *s*, e. g *eset*, *esetis*, *esent* on S. C. de Bacch. (Appendix I. ii); *fuisem* is also said to occur. The form *essem* from *edere* is a case of assimilation=*ed-sem*; similarly *possem*=*pot-sem* (*pot-est*, *pot-is*), *ferrem*=*fer-sem*, *vellem*=*vel-sem* (see above, pp 74–75).

(3) The *Pluperfect* Subjunctive is apparently formed in the same way from the perfect-stem, by adding *-sem*, the *s* becoming *ss* in the ordinary conjugation of all verbs; *amavi-ssem*, *rexi-*

ssem. Schleicher (Comp. § 301) thinks that the forms *vixem* (Virg Aen. xi. 118), *extinxem* (Aen. iv 606), *confluxet* (Lucr. i. 987), etc are not, as is usually supposed, syncopated forms of *vixissem, extinxissem, confluxisset,* etc, but relics of an older formation by the addition of *-sem* to an older perfect-stem without *i* or *is* the ordinary forms in *-issem* being an addition of *-sem* to the *-is,* which, as we have seen above (p 199), there is reason to suppose was characteristic of the perfect-stem, surviving in the terminations *is-ti, is-tis, is-se* The comparison however of these forms with those acknowledged to be syncopated, e.g *dixti, intellexti, misti, accestis, consumpse, traxe, promisse,* etc., rather points to the conclusion that the pluperfect forms in question are later contracted forms

(4) The *Perfect* Subjunctive is formed by adding *-sim=-siem* to the perfect-stem in *i-* thus *feci-siem,* which becomes *fecerim,* the formation thus bearing some analogy to that of the perfect subjunctive passive by the auxiliary *sim* (*amatus sim*), just as the 'futurum exactum' *amav-ero* bears to the fut pass *amatus ero.* The original length of the *ī* in *sīm=siem* appears in *fuerīs, dederīs* (Hor Od iv 7. 20), *dederītis,* etc, though, as has been already noticed (p 184), the confusion with *ĭ* of the 'futurum exactum' has led to frequent intermixing of the quantities in both tenses[1], *ī* is properly characteristic of perf. subj, *ĭ* of completed future indic

INFINITIVES AND PARTICIPLES

The Infinitive is not a 'Mood,' its various forms being cases of verbal-nouns and Philology and Grammar alike must begin by getting rid of the misnomer 'Infinitive Mood,' for the proper understanding of its real nature and historical development The analysis by Grammar of the syntactical uses of the infinitive points to its being a verbal-noun, sharing the properties both of noun and verb[2]. (1) of a *noun,* in that it expresses the action of the verb in general, like nouns of action, and in Greek becomes a verbal-noun by combination with the article, (2) of a *verb*, in admitting inflections of voice and tense, in governing the case of the verb to which it belongs, in being qualified by adverbs and not by adjectives, and (in Greek especially by combination with ἄν) in sharing the functions of mood in *oratio obliqua* And the analysis by Philology of the forms of the infinitive leads us still more surely to the same conclusion, so that there is no class of grammatical forms of which the first origin and subsequent development can more certainly be traced, and a meaning more clearly seen to underlie what meets us in Greek or Latin Grammar as an apparently unmeaning form.

---

[1] For examples of this confusion see Roby, 'Latin Grammar,' § 592

[2] See Roby's 'Latin Grammar,' vol. ii. §§ 1342, 3.

I The Greek Infinitive forms fall into five groups

1 Forms in *-μεναι, -μεν*, *ἔδ-μεναι, ἀμυνε-μεν*
2. Forms in *-εναι, -ναι*, *λελοιπ-έναι, δεικνύ-ναι*
3 Forms in *-εν, -ην, -ειν*; *φέρεν* (Cret), *φέρ-ην* (Aeol), *φέρ-ειν*
4 Infinitive of the sigmatic aorist, *δεῖξαι, ἀμῦναι*
5 Forms in *-σθαι* throughout the Middle

The form in *-μεναι* corresponds to Sanskrit **manê** (**manai**), the dative of a suffix **man-**, by which a large number of nouns are formed in Sanskrit, Greek, and Latin[1], e g from Sanskrit **jnâ**, 'to know,' is formed (j)**náman**, Latin (*g*)*nomen*, that by which a thing is known, its *name* while from the corresponding Greek stem *γνω-* is formed *γνώμων* (*γνώ-μον-ος*)='a knower,' the suffix *-μον, -μεν* (=*-man*) being used in Greek chiefly for forming masculine nouns, *τλήμων, ποιμήν*, etc In Latin *-mĕn* is a common termination of abstract nouns in the neuter gender, e.g *teg-men*, *sola-men*, *car-men*, *tuta-men*, etc. and if we took the dative case of one of these forms to express the object of doing anything, and said *canes fecit tutamini domum*, we should have an exact equivalent to the Homeric expression *κύνας ἔτευξε φυλασσέμεναι δόμον*, 'he made dogs for the protection of the house.' Thus the notion of *purpose* or *object* is in reality the primary notion of the infinitive; and the expression in English of both dative case of nouns and infinitive by the same preposition *to* ('I come *to say* this *to him*') reflects a philological truth

---

[1] See Max Müller's 'Chips from a German Workshop,' vol. iv. p. 33 ('Selected Essays,' i. p. 141).

[The above explanation of *-μεναι* is that preferred by Professor Max Muller, to whose lecture on 'The Value of Comparative Philology' ('Selected Essays' I 11) I am indebted for the statement here given There is, however, another explanation, viz. that *-μεναι* is the *locative* of a suffix *-mana* (*mana-i*, cp p. 126), which, as will be shown below (p 237), appears as a participial suffix in Greek (*φερό-μενο-ς*) and in the isolated Latin form *ama-mini* (sc *estis*, see p 178), *-μεναι* would, on this view, be a locat sing fem of a verbal-noun formed by this suffix, analogous to *χαμα-ί* from stem *χαμα-*. The analogy of locat sing appears at first sight more suitable in the case of 1 aor infin, e g *λῦσαι* from stem *λυσα-* (pp 214 sqq) but it cannot show the same clear coincidence of form and meaning as the other view, and the analogy of *-μεν-αι*, when the consciousness of its being a dative was lost, would tend to produce similarity of termination in *λῦσαι*, though the dative of stem *λυσα-* would properly be something different (*λύσα-αι*, *λύσα-*, see p 128). The *-αι*, however, was not felt to be dative any more than locative, and would assert itself by analogy as the right termination]

The infinitive in *-μεν* is probably an abbreviation of that in *-μεναι*, though it has been suggested that *-μεν* may be an archaic accusative corresponding to Latin accusatives like *tegmen*, etc, and expressing the general object of certain acts or movements

Besides the form in *-μεναι*, we find a parallel form in *-εναι*: thus in Homer we find both *ἴ-μεναι* and *ἰ-έναι*, *ἔμ-μεναι* and *εἶναι* (=*ἐσ-έναι*) Bopp and others have accounted for this form by supposing the loss of *μ* but it is more probably a collateral formation from another suffix *-van* or *-an*, added to verbal bases in the Indo-European languages. 'By the side of **dāman**, the act of giving, we find in the Veda **dā-van**, the act of giving, and a dative **dā-váne**, with the accent on the suffix, meaning "for the giving," i. e. "to give." Now in Greek this *v* would necessarily disappear, though its former presence, might be indicated by the *digamma aeolicum*. Thus, instead of Sanskrit **dāváne**, we should have in Greek δοϝέναι, δοέναι, and contracted δοῦναι. . . . In the same manner εἶναι stands for ἐσ-ϝέναι, ἐσ-έναι, ἐέναι, εἶναι. Hence ἰέναι stands for ἰϝέναι, and the accent remains on the suffix *-van*, just as it did in Sanskrit[1]'

The regular infinitives of the perfect active (λελοιπ-έναι) and of the verbs in -μι (διδό-ναι, ἱστά-ναι, τιθέ-ναι), none of which are Homeric, should be referred, according to Professor Max Muller, to the parallel suffix *-an*, dative *-ane*, for which again he quotes parallel forms in the Sanskrit of the Veda Schleicher, who regards these forms as locatives, refers them to a kindred suffix *-ana*, which appears in the formation of substantives in Greek (δρεπ-ανο-ν, τύμπ-ανο-ν, ἀγχ-όνη, στέφ-ανο-ς, etc) and Latin (*pag-ina*, *dom-ino-s*, *sarc-ina*, etc)

The ordinary infinitive in -ειν is generally regarded as formed by transposition of -ενι: e g φέρενι becomes φέρειν, just as φέρεσι becomes φέρεις (above, p 170) As to the form φέρενι, opinions differ some regarding it as a phonetic corruption of φέρεναι, while others, who hold that φέρεναι is dative, suppose the existence of a locative in -ι side by side with the dative in -αι[2] The Doric form in -εν, e g ἀείδεν=ἀείδειν, is thought to arise from dropping the final ι, instead of throwing it back into the previous syllable, compare the Doric form of 2 sing ἀμέλγες with the ordinary form ἀμέλγεις=ἀμέλγεσι. An Aeolic form φέρην is found and Curtius, comparing this with φέρεν and φέρειν, postulates a common form φέρεεν, in which φερε- is the stem (with thematic vowel), -εν the termination. The raising (in the arsis of a metrical foot?) of the last syllable would give the Homeric infinitive in -εειν (φυγέειν, ἰδέειν, etc). The present infin. in -ειν and strong aorist infin in -εῖν might both arise from -εεν, the accent for the aorist being placed on the thematic vowel (φυγέεν, whence φυγεῖν), for the present or the stem-syllable (φέρεεν, whence φέρειν).

The infinitive in -αι of the sigmatic or weak aorist may be formed on the analogy of the perfect to which its stem formation has affinity, particularly in the characteristic -*ă* (see above, p 192)

---

[1] Max Müller, 'Chips,' iv p. 34 ('Selected Essays,' i p. 142).

[2] Max Müller, 'Chips,' iv. p. 35 ('Selected Essays,' i. p. 143).

The middle and passive infinitives in -*σθαι*, -*θαι* (*δίδο-σθαι*, *τύπτε-σθαι*, *τετύφ-θαι*) are explained by Schleicher and others as dative feminine formations from a suffix *dhi*, i e *dhy-ai*, *θyai*. Sanskrit exhibits forms in **-dhyāi**, which evidently correspond to Greek forms in -*σθαι* e g **bhára-dhyāi**=*φέρε-σθαι*, **sacá-dhyāi**=*ἕπε-σθαι*, **yája-dhyāi**=*ἅζεσθαι* In Zend also occurs a form *verezidyâi*=*ῥέζεσθαι* (*verez*=*ϝρεγ* or *ϝεργ*), and *bû-zhdyâi*=*φύε-σθαι*, the latter apparently showing the *σ* of -*σθαι* The origin of this *σ* is doubtful It may possibly owe its origin to analogy from other middle forms with *σθ*, viz -*σθε*, -*σθον*, -*σθην*, -*σθων*, in which *σ* is perhaps original (see above, p 173); or it may be a phonetic strengthening of -*θαι*, as -*μεσθα* of -*μεθα*, or -*σθαι* may arise by regular phonetic processes of assimilation and dissimilation from -*θyαι*, representing I E *dhyâi*. *θyαι* would become by progressive assimilation -*θθαι* or -*τθαι* (see p 174), and this by dissimilation -*σθαι* The existence of so many different explanations only shows how little can really be known with certainty of the origin of this form In *τετύφ-θαι*=*τετύπ-σθαι*, *σ* has been omitted for phonetic reasons, and *π* assimilated to *θ*

II The forms of infinitive in *Latin* are —

(i) Active	-*re* in *amare, monere*, etc
	-*se* of perfect *amavisse*, and *esse, posse*
	-*le* in *velle, nolle, malle*
(ii) Passive	-*ri* or -*i* in *amari, moneri, regi*
	-*ier* (archaic) in *farier*, etc

(1) The three terminations of infin act are really the same, viz. -*se*=-*sei*, originally the dative case of a verbal substantive whose stem ended in -*as*, dat -*asai*; the -*as* being the same termination as that of fem substantives in -*es* (*sedes*, *labes*), or neuter in -*us*, -*ur*=Greek -*ος* (*genus*, *robur*, *γένος*) Sanskrit has a corresponding dative formation, also used as infinitive, e g. **jīv-ásé** (from **jīv**, 'to live'); and Latin *vehe-re*=Sanskrit **vah-asé**.

The older form *-se* is retained in the perfect *amavis-se* (on the perfect-stem ending in *-is* see above, p 199), in *es-se*, 'to be,' and *es-se=ed-se*, 'to eat,' and in *pos-se=pot-se*; *s* is assimilated to the final consonant of the verb-stem in *ferre=ferse*, and *velle, nolle, malle=vel-se, nol-se, mal-se* When added to the present-stem *s* becomes *r* after the vowel of *ā-*, *ē-*, and *ī-* stems, and the connecting-vowel by which it is attached to consonantal and *u-* stems (*reg-e-re, tribu-e-re*), the *-i* of *ĭ-* stems becoming *ĕ*, as in *capĕre*, present-stem *capĭ-*

[It should be noted that some philologists consider *-ĕre=-ĕse =-asai*, and not *-rĕ*, to be the infinitive suffix[1]. On this view the penultimate *ĕ* of *reg-ĕre, cap-ĕre* is part of the original suffix, the *ĭ* of stem *capĭ-* disappearing before it while in *amāre, monēre, audīre*, the initial *ĕ* of the suffix is absorbed into the long vowel of the stems *amā-*, *monē-*, *audī-*]

The final vowel of the infinitive was originally *ē* (=*ei, ai*[2]), and traces of this are found in Plautus, e g Truc ii 4 74 (iambic trimeter) —

> 'Non aúdes aliquod míhi *darē* munúsculum?'

and Pseudolus, i 3 136, trochaic tetrameter catalectic —

> 'Égo scelestus núnc argentum *prómerē* possúm domo.'

It is still oftener found before the 'caesura' pause in tetrameters and tetrameters catalectic, e g. Asinaria, ii 4 14 (iamb. tetram. catal) —

> 'Abscéde, ac sine me hunc *pérderē*, qui sémper me ira incéndit.'

So *darē*, Ter. Heaut iv 4 2 (724) and other examples quoted by Wordsworth (Fragments, p. 152) from Corssen

The other Italian dialects have an infinitive form in *-om, -um, -o*, apparently an accusative case of a verbal substantive formed from the verbal-stem without any suffix, like *venum, pessum*, in *venum eo* (*veneo*), and *pessum do*; and the ordinary supine in *-um* to which attaches a dative or infinitive meaning, e. g *spectatum veniunt*, 'they come *to see*.'

---

[1] Roby, 'Latin Grammar,' i. § 611

[2] See Corssen, 'Ueber Aussprache,' etc., ii. pp 474, 5, 2nd ed.

(2) Passive infinitive in *ri-er*, *i-er* (*-ri*, *-i*)

(*a*) One explanation of these forms makes *i-er*=*i-se*, i e. a passive or reflexive formation from the infinitive active analogous to *amo-r* from *amo-* (see p 178) Thus *amari-er*= *amare-se* while for consonant-stems a shortened form of infin. act. is assumed, e. g *dice-* or *dici-*, whence *dici-er* It is, however, contrary to the phonetic analogy of Latin that *-se* should thus become *-er* *amare-se*, *dici-se* would naturally become *amares*, *dices*, or *dicis*, as in 2 sing *amaris*=*amasi-se* (p 178) And if the final *r* of *-ier*=*re*=*se*, as in *amor*, then no account is given of the preceding *e*

(*b*) To escape these difficulties Corssen devises a new theory, viz that *-r*=*re*=*se*, and that the rest of the infinitive in *-ier* is a feminine substantive with a suffix *-sia* (after vowels), or *-ia* (after consonants) e. g from stem *ama-*, *amasia-se*, *ama-sies*, *ama-rier*, from stem *dic-*, *dic-ia-se*, *dic-ies*, *dic-ier*

These substantives would be analogous formations to *gloria*, *curia*, etc, and the vowel change from *a* to *e* analogous to that between *materia* and *materies* The theory is perhaps more ingenious than convincing, the mode of composition which it postulates being difficult if not impossible to parallel, and though it avoids difficulties which beset other explanations, it must be ranked with them as a hypothesis upon which little evidence can be brought to bear in either direction

Roby (Latin Grammar, §§ 614, 15) gives substantially the same explanation as (*a*) above Without committing himself to the phonetic change of *-se* to *-er*, he holds that the ordinary passive suffix *-r* (I presume *after* it had taken that form, and its origin as=*-se* had possibly been forgotten) was 'added to the active infinitive in the form of *ĕr*,' the final *ē* of infin act, taking the form of *i* before *-er* on the principle of dissimilation (see p. 62) The final *r* was then dropped, because of its ill sound after another *r*, and *ie* contracted to *ī*. The stages of change on this view are *amare er*, *amari-er*, *amarie*, *amari*. For the shorter forms in consonant and *i-* verbs (*dici-er*, *capi-er*), he accounts in the following way: if the process above described had been followed in these verbs, then, because the penultimate vowel of infin act was short (*dicĕre*), the syllable *ĕr* would have come twice over (*dicĕriĕr*), but the instinctive desire for economy of utterance dropped the first *er*, i e. *-ier* was appended directly to the final consonant of the stem In the absence of evidence for the date and exact process of the supposed changes this view is perhaps as likely to be right as any other.

The period of transition between the two forms (*-ier*, *-i*) can be approximately defined from 220–120 B C. The 'Lex Acilia Repetundarum,' circ 123 B C, offers the latest example from inscriptions of the form in *-ier*, which form may therefore be presumed to have passed out of common use after that date It also offers the first example from inscriptions of the other form in *-i* (*darei*, § 9) but the introduction of this form must have been considerably earlier, as it is more common even in Plautus and Terence than that in *-ier* The dates mentioned will probably represent with tolerable accuracy the period of fluctuation, before which *-ier*, and after which *-i*, was the regular use. In the poets of the later Republic and the Augustan period, Lucretius, Virgil, Horace, etc, the form in *-ier* is an intentional archaism

Perfect Participle Active (Greek) —

An Indo-European suffix *-vat*, *-vant* appears to have the meaning of 'possession of' or 'supply with' anything, e g. Sanskrit **açva-vān** (stem **açva-vat**)='supplied with' or 'possessed of horses' In Greek this suffix appears as *-ϝεντ*, which (with loss of digamma) is found in the adjectival termination *-εις*, *-εσσα*=*-εντ-ς*, *-εντ-yα* *ἰχθυό-εις*, *νιφό-εις*, *χαρί-εις*, etc (stem *ἰχθυό-ϝεντ*, *νιφό-ϝεντ*, *χαρί-ϝεντ*) In Latin it becomes ***-vans***, and (on analogy of *o-* stems) *-vonso*, *-vōso*, which (with loss of *v*) appears in the adjectival termination *-ōso-*, *fructu-ōso*, ***lumin-ōso***, *formâ-ōso* (*form-ōso*, an older form *formonso* being actually found in MSS of Virgil[1], etc.)

The same suffix was also used to form a perfect participle active, which (as the perfect itself) is expressed in many languages by an auxiliary denoting 'possession,' 'I have done,'

---

[1] E g. Ecl v 86

Sanskrit has a perf part in **-vān** (nom masc), **-vat** (neut), to which corresponds the Greek perf partic active *-ώς=ϝοτ-ς*, neuter *-ός=ϝοτ* (the stem appearing in oblique cases *-ότ-ος*, *-ότ-ι*, *-ότ-α*) while the feminine *-υῖα=-υσya* apparently results from the combination of another suffix *-vas* (*-us*) with the feminine suffix *-ya*, and corresponds to Sanskrit **-ushi** Thus Sanskrit **ba-bhu-ván**=*πεφυώς*, **ba-bhu-vát**=*πεφυός* **vid-vān**, **vid-ushi**, **vid-vat**=*ϝειδώς*, *ἰδυῖα*, *εἰδός* (root *ϝιδ*) The effect of the digamma is seen in such forms as *ἑστα-ότες* (Epic), which later Greek contracted into *ἑστῶτες* on analogy of other contracted forms, but which was preserved from contraction while a consciousness of the original digamma in *ἑστα-ϝότες* survived

Present Participle Active

This (as well as the future and aorist participles) is formed in Greek and Latin, and in other Indo-European languages, by a shorter suffix *-ant* or *-nt* (with consonant and vowel-stems respectively) Thus in Greek, from verb-stem *εσ-*, *φερ-*, we have part *ἐσ-οντ-*, *φέρ-οντ-*, from stem *ἱστα-*, *ἱστα-ντ-*, *ντ-ς* in nom sing sinking to *ν* or *ς* with long vowel preceding So from *εἰμί* (*ἐσ-μί*), *ἐς-οντ-ς*, *ἐοντ-ς*, *ἐ-ών*, later *ὤν* from *ἵστημι* (*ἵστα-*), *ἱστα-ντ-ς*, *ἱστᾱς*· in 1 aor. act *λυσα-ντ-ς*, *λυσᾱς*: and in 1 aor pass *λυθεντ-ς*, *λυθείς* The feminine forms are due to addition of *-ya*, e g *ἐσ-οντ-ya*, *ἐοντ-ya*, *ἐοῦσα*, *ἱστᾶσα=ἱσταντ-ya*; and in 1 aor. *λύσασα=λυσάντ-ya*. In these forms the combination *ντ* sinks to *σ* (as in 3 plur, p 176) with compensatory raising of the preceding vowel, and the *y* sound disappears, but remains in fem. substantives,—*γερουσία=γεροντ-ια*, etc

In Latin the ordinary participle stem is *ent-* (older *ont-*, *unt-*, in *e-unt-is*, etc). *Praesens, absens* preserve a participle of *sum*, which exactly corresponds to that of *εἰμί* given above, e.g (*e*)*s-ent-s=ἐσ-οντ-ς*, the termination *-nts* of nom sing, which in Greek becomes *-ων* (or in 1 aor. *-ᾱς*), becoming *-ns* by the phonetic laws of Latin. The feminine forms corresponding to those of Greek are not used as participles, but are common as feminine substantives, *sapient-ia*, *abundant-ia*, etc.

Greek Middle and Passive Participle in -μενος:—

The participial suffix *-μενο-*, by which are regularly formed the present and future, middle and passive, the aorist middle and perfect passive participles, seems to represent an original Indo-European *-mana*, one of the many developments of the element *-ma* in the formation of nominal stems (see above, p. 102). In Sanskrit this appears as **-mâna**, forming middle and passive participles from the present, and strong aorist, and future stems, in Zend as *-mna*, also participial, in Latin as *-mino*, *-mno* forming substantives like *ter-minu-s*, *fe-mina*, *alu-mnu-s*, and with traces of a participial signification in the isolated verb-form of 2 plur. passive, *amamini*, etc. (see above, p. 178). Thus we have, from the stem *bhar*, Sanskrit **bharamâna**, Zend *bare-mna*, Greek *φερό-μενο-ς*, Latin *feri-mini*.

Latin Past Participle Passive in -tus, and *Supines*.—

The suffix *-ta* (above, p. 102), one of the commonest noun-suffixes among Indo-European languages, seems to have become at one period a regular mode of expressing the idea of a perfect passive participle ('having been'). This function it retains in the Italian languages, e. g. Latin *scripto-*, Umbrian *screih-to*, Oscan *scrifto-*, but here also there are many traces of a less closely defined use of the suffix in the formation of verbal nouns both substantive and adjective[1], as in the Greek verbal adjective termination *το-ς*, and nouns of action like *κρι-τής*, *ποιη-τής*, etc. Such traces are found in the many verbal substantives in *-tus*, declined sometimes as *o-* stems, more often as *u-* stems, —*gemi-tus*, *fremi-tus*, *par-tus*, etc., and the 'supines' in *-um* and *-u*, which are obviously accusative and ablative cases respectively of such a verbal substantive, often not to be distinguished in form from the substantive itself actually in use. Compare, for example, the substantive *visus* as used by Virg. Aen. ii. 212, 'Diffugimus *visu* exsangues,' with the supines *visum*, *visu* of the verb *video*. The perfect part. passive, supines, and such verbal substantives, have therefore one common element of formation, viz. the suffix *ta-* (*to-*, *tu-*), and the stem formed by the addition of this suffix is sometimes spoken of as the 'Supine-stem,' understanding by that term the base or stem common to these various formations from verbal stems. And in treating here of the formation of the past participle passive in *-tus* it will be convenient in some cases to borrow examples from the head of 'supines' or 'verbal substantives.'

---

[1] A list of Latin verbs, with their perfects, supines, etc., is given in Roby's 'Latin Grammar,' i ch. xxx. pp. 239-264.

The addition of the element *-to* to the verbal-stem is marked in some cases by certain phonetic changes, which may be shortly noticed here. In the formation from *ē-* stems, the stem-vowel becomes shortened to *ĭ* in Latin, e. g. *monĭ-tus* (*monē-*), *tacĭ-tus* (*tacē-*). With *ā-* stems it generally remains as in *amā-tus*, but is sometimes shortened to *ĭ*, *domĭ-tus* (*domā-*), *attonĭ-tus* (*tonā-re*), this *ĭ* being absorbed by a preceding *v* in *adjū-tus*=*adju-vĭ-tus* (*juvā-*), and *lautus*=*lavĭ-tus* (*lavā-*), cp. *cautus*=*cavĭ-tus* (*cavē-*), and *fōtus*, *mōtus*, in which the *v* sound has also been absorbed into the preceding vowel. With *ī-* stems the *ī* remains, as in *audī-tus*, *molī-tus*, but is occasionally dropped out, as in *sanc-tus* (*sancī-tus* being also in use), *comper-tus* (but *perī-tus*).

From the cases above mentioned, in which *ĭ*, preceding the participial element *-to*, is a degradation of sound from *ā* or *ē*, must be distinguished those in which *ĭ* is either part of the stem, or a connecting-vowel. In *gem-ĭ-tus*, *vom-ĭ-tus*, *gen-ĭ-tus*, *frem-ĭ-tus*, and a few similar formations from consonant-stems, it may be only a connecting-vowel introduced for the sake of euphony (see above, p. 165). Without it the forms from stems *gem-*, *vom-*, *frem-* would, by the ordinary euphonic laws of Latin, either have lost their characteristic *m*, becoming *fren-tus*, *von-tus*, *gen-tus*, or have assumed the ugly forms *fremptus*, *vomptus*, *gemptus*, by the insertion of *p* sound which seems to follow naturally upon the transition from *m* to *t*, *s*, or *l* [cp. *sum-p-tus*, *sum-p-si*, *tem-p-lum* (*τέμ-ενος*[1])]. Roby (§ 698) suggests that the forms *alĭ-tus* (post-Augustan) and *molĭtus*, from *al-ere*, *mol-ere*, may be due to a desire to distinguish these participle forms from the adjectives *altus*, *moltus*, and that *strepĭ-tus*, *genĭ-tus* may have originally had stems in *a-* (*strepa-* and *gena-*, cp. *gna-scor*, *gna-tus*). In *pos-ĭ-tus* (*pōno*=*pos-no*, *pos-ui*) the connecting-vowel is employed, but not universally, in the compound forms; e g *repos-tus, compos-tus* and *composi-tus, sepos-tus* and *seposi-tus*

---

[1] Thus *hiemps*, *tempto* (not *hiems*, *tento*) are the correct forms.

Verbs in *-ĭo*, whose present-stem is formed by addition of *i=ya* to the verbal-stem (above, p 210), generally affix the supine or past participle element direct to the verbal-stem, e g *capĭ-o, cap-tus.* Where *ĭ* appears, it may be regarded either as the *ĭ* of present-stem, or more probably as a connecting-vowel, e g *fug-ĭ-tum* (*fug-ĭ-o, fug-i, fŭg-a*), where the insertion of a connecting-vowel preserves the characteristic *g*, which otherwise would have become *c* before *t*, as in *fractus* (see p 49) So we have *elicĭ-tum*, but *illec-tum*, and in certain words the connecting-vowel, not used before the past-participle and supine, is inserted before the fut participle for euphony (*or-tus or-ĭ-turus, mor-ĭ-turus, par-ĭ-turus, par-tus*)

Verbs in *-uo* (*u-* stems) generally have *ū* preceding *t* of participle or supine, e g. *acū-tus, exū-tus, imbū-tus*, etc The stem-vowel of such verbs being generally *ŭ*, the *ū* is perhaps due to coalescence of a connecting-vowel with the stem-vowel, e. g. *imbŭ-ĭ-tus, imbū-tus* A few verbs retain *ŭ*, e g *rŭ-tum* (according to Varro *rūtum*), the future participle being *rŭ-ĭ-turus*, cp *ob-rŭtus* and *clŭ-tus* from *clu-eo* (κλύ-ω), whence *in-clu-tus.*

With consonant-stems the suffix *-t-* appended to the verb-stem is sometimes softened to *s*, usually by the influence of a preceding dental (all dental-stems having *-sus, -sum* in past participle and supine[1]) The dental either drops out, the preceding vowel being lengthened in compensation (e g. *divī-sum =divĭd-tum, man-sum=mand-tum*, or it is assimilated (*mes-sum = met-sum, quas-sum = quat-sum*) *Lap-sus* from *lab-or* illustrates the same process after a labial: and *fixus* (*=fic-sus* for *fig-tus*) after a guttural The guttural, however, often drops out, e g *par-sum=parc-tum, spar-sus=sparg-tus.* [*Fig-tus* would naturally become *fic-tus* (see p. 49), and this would lead to confusion with *fic-tus*, part of *fingo* And in this and most other cases of change to *s*, otherwise than after a dental (as above) or after a liquid and some other consonant (*ard-, arsum*, etc.), it is noticeable that the perfect active, if any, is formed with *-si*. so that the *s* of participle and supine may be the result of analogy from that of the perf. act]

---

[1] For examples, see Roby, § 707, 8.

Future Participle in -turus (Latin) —

The termination of the stem of fut partic active in *-turo* appears to represent an Indo-European *-tara*, a variety of *-tar*, which is largely used in the formation of nouns of agency (*-tar*) or implement (*-tra*) In Sanskrit and Zend the suffix appears as -tar, *-tra* In Greek it appears as *-τερ* in *πα-τήρ*, *πα-τέρ-ος*, *σωτήρ=σωτερ-s*, etc , or *-τορ* in *ῥήτωρ*, *ῥή-τορ-ος*, *ἵστωρ*, *ἵστορ-ος*, etc , and a feminine *-τρια=tar-ya* is found in *ποιήτρια*, etc , while in other cases the *ι* of the feminine suffix *ya* is thrown back into the previous syllable, e g. *σώτειρα=σώτερ-ya*, *δότειρα =δότερ-ya* Another specially Greek form is a feminine stem in *-τριδ=tarid*, formed by suffixing *-ιδ*, e g *πατρίς*, *πα-τρίδ-ος* *-tra* appears as *-τρο* or *-θρο* (neut), and *-τρα*, *-θρα* (fem), e g *νίπ-τρο-ν*, *ἄρο-τρο-ν*, *ῥή-θρα*, *μάκ-τρα* (root *μακ-* of *μασσω=μάκ-yω*), *κοιμή-θρα*, etc Latin has forms almost identical *pa-ter*, *ma-ter*, etc , nouns of agency, as *vic-tor*, *censor=cens-tor*, *sponsor=spond-tor*, etc , of implement, as *ara-tru-m*, *claus-tru-m=claud-tro-m*, *ros-tru-m=rod-tro-m* The suffix is also further increased by *-ya* to *-trio*, *-torio-* (*pa-trio-s*, *victoria*), by *-ic* to *-tric-*, a feminine suffix, as in *victric-s*, by *-ino*, as in *doc-t(o)rina* To the longer form *-tara* corresponds *-turo-* of fut partic act, and feminine nouns of action, e g *sepul-tura*, *usura=ut-tura*

APPENDIX I.

Specimens of Latin Inscriptions from 250 B C to the close of the Republic.

THE following selection of Latin Inscriptions is given as a fuller and more connected illustration of those gradual changes in the form of Latin words, to which incidental allusions have been necessary in the preceding pages For the text of the inscriptions cited I am immediately indebted to selections made from the *Corpus Inscriptionum Latinarum* (ed Mommsen) and Ritschl's *Priscae Latinitatis Monumenta Epigraphica* by Messrs Wordsworth (in 'Fragments and Specimens of Early Latin') and Roby ('Latin Grammar,' vol i Appendix B), of the general accuracy of whose citations I have satisfied myself by comparison with the authorities whom they have followed. The inscriptions are all in 'uncial' (i e. capital) letters The vertical strokes denote the ending of lines on the original inscription. but in the version (in italics) of the Scipionic Epitaphs they mark the 'caesura' of the Saturnian metre.

I. Epitaphs of the Scipios —

1. On L Cornelius Scipio Barbatus, consul 298 B. C. (Inscription not later than 240 B C.)

cornelius . lucius . scipio . barbatus . gnaiuod . patre | prognatus . fortis . uir . sapiensque—quoius . forma . uirtutei . parisuma | fuit—consol . censor . aidilis quei . fuit apud . uos—taurasia . cisauna | samnio . cepit—subigit . omne . loucanam . opsidesque . abdoucit. |

Cornelius Lucius | *Scipio Barbatus,*
Gnaeo patre prognatus | *fortis vir sapiensque*

Cujus forma virtu | ti parissuma fuit,
Consul, censor, aedilis | qui fuit apud vos
Taurasiam Cisaunam | Samnium cepit
Subigit omnem Lucaniam, obsidesque abducit

2. On L Cornelius Scipio, consul 259 B C (Inscription perhaps earlier than No. 1)

honcoino ploirume consentiont r
duonoro optumo fuise uiro
luciom scipione filios barbati
consol censor aidilis hic fuet a
*h*ec . cepit . corsica aleriaque . urbe
*d*edet tempestatebus aide mereto

Hunc unum plurimi con | sentiunt romai (i e *romae*)
bonorum optimum fu | isse virum virorum,
Lucium Scipionem | Filius Barbati
consul, censor, aedilis | hic fuit apud vos
Hic cepit Corsicam Aleri | amque urbem pugnando,
dedit tempestatibus | aedem merito votam.

3 On P Cornelius Scipio, perhaps son of Sc Africanus Major, augur 180 B C (Inscription about 160 B C)

quei apiceinsigne . dial aminis gesistei |
mors perfe tua ut . essent . omnia |
breuia hon os fama uirtusque |
gloria . atque ingenium . quibus sei |
in longa licui set tibe utier uita |
fa cile factei superases gloriam |
maiorum qua re . lubens te ingremiu |
scipio recip t terra . publi |
prognatum publio . corneli

Qui apicem insignem dialis | flaminis gessisti,
mors perfecit tua ut | essent omnia brevia,
honos fama virtusque | gloria atque ingenium,
quibus si in longa licuis | set tibi utier (i e. *uti*) *vita*
facile factis superasses | gloriam majorum.
Quare lubens te in gremium, | Scipio, recipit
Terra Publi. prognatum | Publio Corneli (i.e. *Cornelio*).

4 On L Cornelius Scipio (uncertain who is meant) The inscription dates about 150 B.C)

l cornelius cn . f. cn . n scipio magna sapientia |
multasque uirtutes . aetate quom parua |
posidet hoc saxsum quoiei . uita . defecit non |
honos honore is hic situs quei . nunquam |
uictus est uirtutei . annos gnatus XX is |
d *ei* s datus ne . quairantis honore |
queiminus sit . mand u

Lucius Cornelius, Cnaei filius, Cnaei nepos, Scipio
magnam sapientiam mul | tasque virtutes
aetate cum parva | possidet hoc saxum
quoiei (i e *cui*) *vita defecit | non honos, honorem*
Is hic situs Qui nunquam | victus est virtute
annos natus viginti | is Diti est mandatus
ne quaeratis honorem | quiminus sit mandatus

II From the Senatusconsultum de Bacchanalibus, (or Epistola Consulum ad Teuranos,) 186 B C , cp Livy XXXIX 8–18

censuere | homines plous u oinuorsei uirei atque mulieres sacra . ne quis quam | fecise uelet neue . inter ibei uirei pl*d*us . duobus mulieribus . ploustribus | ar*f*uise uelent nisei . de pr urbani senatuosque sententiad utei . suprad | scriptumest haice . utei . in . couentinoid . exdeicatis ne minus trinum | noun dinum senatuosque . sententiam utei scientes . esetis eorum . | sententia . ita fuit sei ques . esent quei aruorsum . ead fecisent quam . suprad | scriptum est eeis remcaputalem . faciendam . censuere atque utei | hoce . in . tabolam . ahenam . inceideretis . ita senatus aiquom cen suit | uteique eam . figier . ioubeatis . ubei facilumed . gnoscierpotisit . atque | utei . ea bacanalia . sei qua sunt . exstrad . quam sei . quid ibei . sacri est | ita utei suprad . scriptum est . in . diebus . x . quibus . uobeis . tabelai . datai erunt . faciatis . utei dismota . sient in agro . teurano

Censuere homines plus quinque universi, viri atque mulieres, sacra ne quisquam fecisse vellet, neve interibi viri vlus duobus *mulieribus plus tribus, adfuisse vellent, nisi de praetoris urbani senatusque sententia, uti supra scriptum est.*

Haec uti in contione exdicatis ne minus trinum nundinum, senatusque sententiam uti scientes essetis Eorum sententia ita fuit siqui essent qui advorsum ea fecissent, quam supra scriptum est, eis rem capitalem faciendam censuere

Atque uti hoc in tabulam ahenam incideretis ita senatus aequum censuit;

Utique eam figi jubeatis, ubi facillume nosci possit,

Atque uti ea Bacchanalia, siqua sunt, extra quam si quid ibi sacri est, ita uti scriptum est, in diebus decem, quibus vobis tabellae datae erunt, faciatis uti dimota sint. In agro Teurano

III Inscription of the same age as S C de Bacch, but less antique in spelling, (the former being of a more formal legal nature) The earliest example of doubled letters

laimilius l f inpeirator . decreiuit | utei quei . hasten sium seruei | in turri lascutana habitarent | leiberei es sent . agrum oppidumqu | quod ea tempestate posedisent | item possidere habereque | iousit . dum poplus senatus que | romanus uellet act incastreis | ad . xii k febr

IV From an inscription at Polla in Lucania, recording works executed by P Popillius Laenas, consul 132 B.C.

uiam . feci ab regio . ad . capuam . et | in ea uia . ponteis . omneis . miliarios | tabelarios que poseiuei . hince sunt | nouceriam . meilia ↓I . capuam XXCIIII | muranum ↓XXIIII . cosentiam . CXXIII | ualentiam C↓XXX . ad fretum . ad statuam CCXXXI | et . eidem praetor . in | sicilia . fugiteiuos italicorum | conquaesiuei . redideique | homines . DCCCCXVII eidemque | primus fecei . ut . de . agro poplico | aratoribus cederent . paastores | forum . aedisque . poplicas . heic . feci.

[Note in this inscription the fluctuation between ē, ei, ī (*homines, ponteis, feci, fecei*) and one example of doubled vowel (*paastores*)]

V. Two inscriptions found at Capua and Aeclanum, and
by Ritschl (*Pr Lat. Monumenta*, LXIII A, LXIII C)

to the years 108 and (about) 90 B C , but exhibiting in some forms (e g *venerus, loidos, moiros*) the spelling of a considerably earlier period.

1 heisce magistreis venerus iouiae . muru | aedificandum coirauerunt ped CC↓XX et | loidos . fecerunt ser . sulpicio m aurelio cof

Hi magistri Veneris Joviae murum aedificandum curaverunt pedes CCLXX *et ludos fecerunt, Servio Sulpicio Marco Aurelio consulibus*

[*cof* is a stone-cutter's mistake for *cos*]

2. c quinctius c f ualg patron munic | m magi . min f surus a . patlacius q f | IIII uir d s . sportas turreis . moiros | turreisque a equas qum moiro | faciundum coirauerunt.

C. Quinctius, Caii filius, Valgus patronus municipi, M Magius, Minucii filius, Surus, A Patlacius, Quinti filius, quattuor viri de senatus sententia portas, turres, muros, turresque aequas cum muro faciundum (error for *faciundas*) *curaverunt*

VI From Sulla's Law 'de XX quaestoribus,' B C 80; cp. Tac Ann XI 22

q urb quei . aerarium prouinciam optinebit . eam | mercedem . deferto quaestorque quei . aerarium prouin ciam | obtinebit eam . pequniam ei scribae . scribeisque . heredimie | eius soluito idque ei . sine fraude sua . facere . li ceto . quod | sine . malo . pequlatuu . fiat . olleis que . hominibus . eam | pequniam . capere . liceto

VII. From Lex Julia Municipalis, B. C 45.

quae . uiae in urbem . rom propiusue . . r . p . q . ubei . con tinente . habitabitur sunt . erunt . quoius . ante aedificium . earum . quae | uiae . erunt . is . eam . uiam . arbitratu . eius . aed quoi . ea pars . urbis . h . l . ob . uenerit . tueatur . isque . aed . curato . uti . quorum | ante . aedificium . erit . quamque . uiam . h . l . quemque . tueri . oportebit . ei . omnes . eamuiam

. arbitratu . eius . tueantur neue eo | loco . ao consistat quomi
nus . conmode . populus ea . uia . utatur

[*p* *q* is a mistake for *p* *m*.=*passus mille*]

VIII A monumental inscription upon a young actress, dated by Mommsen (C. I R. 1009) and Ritschl (*Pr Lat Mon* LXXXI) at the end of the Republic, and exhibiting in the main the orthography familiar to us in classical Latin most of the peculiarities being due to the carelessness of the mason who cut the inscription (e g *propiravit*, line 7; *denecavit* for *denegavit*, l 9, *deposierunt* for *deposuerunt*, and *infistae* for *infestae*, l 14) The 'apex' (see above, p 48) is found on two words only, *léti* (l 1) and *hóra* (l 7)

Eucharis licini*ae* . *l*
docta erodita omnes artes uirgo ui*xit* *an* *xiiii*

heus . oculo . errante quei aspicis . léti dom*us*
morare gressum et titulum . nostrum . perlege
amor parenteis quem dedit natae suae
ubei . se reliquiae conlocarent corporis
heic . uiridis aetas . cum floreret artibus
crescente . etaeuo . gloriam conscenderet
propirauit hóra . tristis fatalis mea
et denecauit ultra uitae . spiritum
docta erodita paene musarum . manu
quae modo nobilium ludos decorauichoro
et graeca . inscaena prima populo apparui
en hoc in . tumulo . cineremnostri corporis
infistae parcae deposierunt . carmine
studium patronae cura amor . laudes decus
silent . ambusto corpore . et . leto . tacent
reliqui . fletum nata . genitori . meo
et . antecessi . genita post leti . diem
bis hic . septem . mecum natales . dies
tenebris . tenentur . ditis aeterna dom*u*
rogo ut . discedens . terram . mihi . dic*as leuem*

APPENDIX II

A —Adverbial Terminations in Latin

The following list of the various terminations of Adverbs, Prepositions, or Conjunctions in Latin will supply more or less obvious illustrations of the statement on p 93, that they are all in their origin case-forms of Nouns A few examples only of each are given, and for a more complete list the student is referred to Roby's Latin Grammar, i §§ 508–547, from which this arrangement is borrowed.

I Vowel-endings —

-ā. *eā*, *hāc*, *circā*, *juxtā*, *suprā*, *contrā* [ablative sing feminine from *a-* or *o-* stems]. *anteā*, *proptereā*, *postillā*, etc, seem to be accus. plur neut. (see p 155)

-ă *ită*, *quiă* [apparently accus plur neuter]

-ae *prae* [probably locative *-ai*, or dat with locative force]

-ō a common adverbial termination, originally ablative singular of *-o* stems=older *-ōd*, cp Greek οὕτω, οὕτως

(1) From substantives *ergo* (ἔργῳ), *extemplo* (=*extempulo*, diminutive of *ex tempore*), *illico* (*in loco*), *modo*, etc

(2) From adjectives and participles *cito*, *denuo* (*de novo*), *omnino*, *subito*, *vero*, *improviso*, *necopinato*, etc.

(3) Numeral adverbs, *primo*, *secundo*, etc., so *immo* (=*imo*, 'at the lowest or least'), *postremo*, etc. [ablatives with local signification,—in such a place.]

(4) Pronominal,. chiefly of direction to a place (perhaps originally adverbs of manner or circumstance): *eo*, *quo-ad* ('whither to'), *illoc* (Plautus, later *illuc*), *intro*, *porro* (πόρρω).

Under this head come the adverbs of direction ending in *-orsus*, *-orsum*, i e *-o-vorsus*, *-o-vorsum*, 'turned towards,' a combination analogous to *quo-ad*, *ad-eo*

(5) Adverbs formed by suffix *-do* *quando* (*quam-do*), *endo*, or *indu*, an old form of *in*, seen in the forms *endoperator*, *induperator* (Ennius), and *indigeo* (*indu*, *egeo*).

-u *diu*, *noctu*, *du-dum* (=*diu-dum ?*) Ablatives

-ē the common adverbial termination from positive and superlative adjectives with *-o* stems [apparently ablative sing ; see above, p 124], e.g *valde*, *vere*, *fere*, *ferme* *Apprime* (prae-Ciceronian) is probably=*ad prima*, an adverbial expression analogous to *imprimis*, the *ē* being due to the analogy of other adverbs

-ĕ generally speaking a shortened form of the preceding (*-ē*) termination, like abl sing in *-ĕ* of 3rd decl (p 125)

(1) From *-o* stems (as *-ē* above)· *bĕne* (*bono-*), *malĕ*, *supernĕ*, etc ; and possibly *mactĕ* in the phrase *macte virtute esto* (though this is more probably a vocative case)

(2) From other stems· *abundĕ*, *facilĕ*, *impunĕ*, *magĕ*, *spontĕ* (abl of *spons*)

-pĕ a form of *que*, e g *nem-pe* (=*nam-pe*, cp *namque*).

-vĕ perhaps=*vel*, thus *neve*='or not.'

-cĕ *eccĕ*=*en-ce*, *sic*, etc , and appended to locative adverbs, *hīc*, *illīc*, etc. (see p 153)

-quĕ a case-form of *qui*, appended to pronouns and pronominal adverbs (perhaps, as Roby suggests, a kind of reduplication) *quis-que*, *quando-que*, etc , so with prepositions and conjunctions, *absque*, *atque* (*ac-que*), *namque*, etc.

-ptĕ. *suopte*, etc , possibly=*pŏte*, as in *ut-pote*.

-dĕ *in-de*, *undĕ*, etc. Perhaps=*dē* (preposition) shortened by loss of accent.

-nĕ: *sinĕ*, *pone* (=*pos-nĕ*) Probably the same as the interrogative particle *nĕ*, which again may=*nē*, 'verily' (wrongly written *nae* from analogy of Greek *ναί*, *νή*).

-ī (occasionally shortened to *ĭ*):—

(1) Ablative cases of manner: *quī*, *quīn* (*qui-ne*), *si* (abl. of a pronoun='in which case'), *sīc* (=*si-ce*, 'in this way'), *utī*

(probably=*quo-ti*, 'in which way,' *ti* being=*si* above, *brevi*, *proclivi*, etc.

(2) Locative (or Dative) cases, *illi*, *isti* (Plaut, Ter), more usually *illīc*, *istīc*, *herī*, *temperī*, etc and in the termination *-bi* of pronominal adverbs, *ibi*, *ubi*, etc.

II Consonant-endings (Labial and Dental) —

-b *ab*, *ŏb*, *ŭb*=Greek ἀπό, ὑπό, Sanskrit **apa**, **upa**, from pronominal stem *-pa* (p 98, note) The form ὑπαί suggests a locative case

-am probably accusative cases, e g *quam*, *obviam*, etc, and thence by analogy to such forms as *coram* (*cum*, *os*), *perperam* (*per-per-am*), 'thoroughly,' in termination *fariam* of *bifariam*, etc, and in suffix *-dam* appended to pronouns and pronominal adverbs—*quidam*, *quondam*, etc (see p 156)

-om (*-um*) Accusative cases *donicum* (Plaut), later *donec*, *dum*, *quom* (*cum*); *actutum*, *circum* (stem *circo-*), *clanculum* (*clam*, with diminutive suffix), *extremum*, *parum*, etc; *rursum*, *adversum*, etc

-em · accusative cases · *propediem*, *-tem* in *autem*, etc (from pronominal stem *ta-*, see p 156, *-dem* in *quidem*, etc (cp *-dam* above)

-im. (1) in pronominal adverbs, with the meaning of 'at' or 'from' a place, and so apparently a locative termination (see above, p 127), e g *illim*, *hinc* (*him-ce*), *enim* (=*in-im*, *im* being locat of *is*)

(2) In termination *-tim* (*-sim*) of adverbs from or similar to past participles *raptim*, *conjunctim*, *mixtim*, *strictim*, etc.; *sta-tim* (*sta-re*='as you stand'), *confestim* (perhaps from *con-ferire*), etc; *partim*, *ubertim*, *vicissim*, etc These may also be locative cases, with the meaning of 'circumstance under which;' but such a form as *partim* is suggestive of the accusative case, which (as we have seen, p 115) is thus formed with certain nouns of the consonant or *i*- declension From verbs or nouns with *a-*, *u-*, or *i-* stems we have adverbs in *-a-tim*, *-u-tim*, *-ī-tim*. e g. *certatim*, *nominatim*, *minutim*; *gregatim*, *turmatim*, *generatim*, *tributim*, *viritim*, etc.

-d in *ad sed*, *haud*, *apud* is perhaps the old ablative suffix

(p 124), and *quod* in *quodsi*, *quod utinam*, etc, is by some called an ablative But *quod*=‘because’ is most naturally accus of respect (cp. Greek ὅτι and the use of ὅ=‘whereas’), and the same explanation must hold in the other phrases with which it is compounded

-t in *ast*, *et*, *at*, may be only a phonetic variety of *-d* (*haut* and *set* are given as varieties of *haud*, *sed*), *ut* seems to be short for *uti* It is true that Greek ὡς=ὡτ, the ablative of ὅς (see p 124), rather points to the *t* as final, but then *uti* would be a different word and as this is improbable, it seems better to give up the attempt to show that ὡς and *ut* are identical

-n: *an*=Greek ἄν, which by some is connected with ἀνά, *en*, *in* (*endo*), *quin*=*quine*

-l *procul*, *simul* (older *semol*=*simile*), accusative neuter *vel*, perhaps imperative of *volo*

-er the suffix of the comparative degree in *sup-er* (comparative of *sub*=‘up’) and its compounds

-per same word as *per* (preposition), connected with παρά, περ-ᾶν, *pierce*, etc, always of time, *nuper* (*novumper*), *semper*, etc

-ter a common adverbial suffix from nouns of *o-* and *i-* stems, by some identified with *-tus*, and regarded as an extension of the ablative suffix *-d* or *-t*, by others connected with the comparative suffix seen in Greek -τερο-ς, Latin *de-ter-ior*, etc. (see p 133)

-tus appears to=Sanskrit -tas of adverbs, and perhaps Greek -θεν, as *-mus* of 1st pers. plur =Greek -μεν (see p 169): but -θεν more probably=another suffix -dhas

-as *alias*, *foras*, etc, accusative plural.

-us. *secus*, *tenus*, etc., perhaps neuter accusatives.

-is: (1)=*ios* (*ius*), neut acc of the comparative suffix (p 133): *magis*=*magios*, *nimis*=*nimios* Perhaps this is the origin of *is* in *paullisper*, *tant-is-per*, etc. (2) Ablative plur. in *foris*, *gratis* (*gratiis*), etc

-iens or *-iēs* the suffix for numeral adverbs, connected perhaps with the comparative suffix *-yans* (Sanskrit īyan(s), īyas, Greek -ιων, -ιον; Lat. *-iōs*, *-ius*: see pp. 132, 133).

B—Adverbial Terminations in Greek (Homeric).

[From Homer, Iliad I, edited by D B Monro. Clarendon Press, 1878]

The chief suffixes used to form adverbs in Homer are as follows —

-θι, expresses the *place where* as *τό-θι*, *ὅ-θι*, *πό-θι* (=Attic *ποῦ*), *κεῖ-θι* (=Attic *ἐκεῖ*), *αὐτό-θι* (=Attic *αὐτοῦ*), *ἕκτο-θι*, *ἔνδο-θι*, *ἀπόπρο-θι*, *ἐγγύ-θι*, *ὑψό-θι*, *νειό-θι*, *ἑτέρω-θι*, *οἶκο-θι*, *ἠῶ-θι*, *οὐρανό-θι*, *κηρό-θι*, *Ἰλιό-θι*, *Κορινθό-θι*

-θεν, *place whence*, used with nearly the same stems as *-θι*, as *ὅ-θεν*, *πό-θεν*, *κεῖ-θεν*, *ἑτέρω-θεν*, *ἠῶ-θεν*, etc It is often used after *ἐξ* and *ἀπό*, as *ἐκ Διο-θεν*, *ἀπ' οὐρανό-θεν* There is also a suffix *-θε(ν)*, *πρόσ-θε(ν)*, *in front*, *ὄπισ-θε*, *ὄπι-θεν*, *behind*, *ὕπερ-θε(ν)*, *ἔνερ-θε(ν)*, *πάροι-θε(ν)*

-σε, *place whither*, as *πό-σε*, *κεῖ-σε*, *ἑτέρω-σε*, *ὁμό-σε*, *πάντο-σε*

-τος, *place*, *ἔν-τος*, *ἔκ-τος*

-χι, in *ἧ-χι* *where* (lit *which way*, like Lat *quâ*)

-χα, **-χθα**, with numerals, *δί-χα*, *two ways*, *τρί-χα*, *πέντα-χα*, and *τρι-χθά*, *τετρα-χθά*

-δε, *place whither*, suffixed to the acc, as *οἰκόν-δε*, *πόλεμόνδε*, *ἄλαδε*, etc

-δις, *direction* or *manner*, *χάμα-δις*, *to the ground*, *ἄμυ-δις*, *together*, *ἄλλυ-δις*

-δον, **-δην**, **-δᾰ**, *manner*, *ἀποστα-δόν*, *aloof*, *ἰλα-δόν*, *in crowds*, *βοτρυ-δόν*, *in clusters*, *πυργη-δόν*, *in column*, *βά-δην*, *κρύβ-δην*, *κλή-δην*, *ἐπιγράβ-δην*, *ὑποβλή-δην*, *ἐπιστροφά-δην*, *μίγ-δα*, *κρύβ-δα*, *ἀμφα-δά*, *αὐτοσχε-δά*

-ᾰ, *manner*, *ἄρ-α* (lit. *fittingly*), *ἅμ-α*, *μάλ-α*, *θάμ-α*, *thickly*, *τάχ-α*, *σάφ-α*, *κάρτ-α*, *ῥεῖ-α*, *ὦκ-α*, *ἦκ-α*, *οἶψ-α*, *λίγ-α*, *σῖγ-α*, *ῥίμφ-α*, *πύκ-α*, *κρύφ-α*.

-η, *way*, *direction*, *πάντ-η*, *every way*.

-ει, **-ι**, *time*, *manner*, *αὐτο-νυχ-εί*, *that very night*, *τρι-στοιχ-ί*, *in three rows*, *ἀναιμωτ-ί*, *bloodlessly*, *ἀμογητ-ί*, *without effort*.

-ου, *place*, *ποῦ*, *ὁμ-οῦ*, *ἀγχ-οῦ*, *τηλ-οῦ*, *ὑψοῦ*, *αὐτ-οῦ*, in meaning like the adverbs in -όθι, which are more common in Homer.

-ως, *manner;* a suffix of which there are comparatively few examples in Homer ὥς, τῶς, πῶς, ὁμῶς, φίλως, αἰνῶς, κακῶς, and a few others from stems in **-ο.** From other stems, ἀφραδέ-ως, περιφραδέ-ως, προφρονέως

-ω, chiefly from prepositions; εἴσ-ω, *towards*, ἔξ-ω, *outwards*, πρόσσω, *forwards*, ὀπίσσω, *backwards*, προτέρ-ω, *farther on*, ἑκαστέρ-ω, ἑκαστάτ-ω, *farther*, *farthest*, ἀσσοτέρ-ω, *nearer*, ὧ-δε, οὕτ-ω are exceptional.

Many adjectives are used adverbially in the accusative neuter

Variations in the endings of adverbs to be noted —

1. Moveable final **-ς**, ἀμφίς and ἀμφί, μέχρις and μέχρι, μεσσηγύς and μεσσηγύ, ἰθύς and ἰθύ, πολλάκις and πολλάκι, etc

2 **Prepositions** **παραί**, **καταί**, **ὑπαί** (perhaps locatives, like χάμαι), **προτί** and **ποτί** (fuller forms of πρός), **ἐνί** (ἐν) Cp αἰεί and αἰέν

3 **Apocope** occurs in **ἀνά** (ἂν δέ, ἂμ πεδίον, etc), **κατά** (κὰδ δέ, κὰπ πεδίον, κάββαλε, etc), and **παρά**, also in the particle **ἄρα**

C—Table of Cases used Adverbially in Latin.

Cases used	Examples of Adverbs formed
1 Accusative—	
Sing -m	quom (cum), circum, quam, obviam, propediem
" -d, -s	quod, magis (-ios), secus
Plur. -ās	alias, foras, etc
" -ă	quia, ita Also neut. sing and plur of all adjectives
2 Ablative—	
Sing -ō (-ŏ), -ā, -ū	ergo, subito, primo, illoc, modŏ, citŏ, eā, juxta, interea, diu, noctu
" -ē (-ĕ), -ī (-ĭ)	facillimē, benĕ, quī, brevī, utī
" -d, -t, -tus, -ter	facillimēd, haud, apud, ast, et (?), caeli-tus, firmi-ter.
Plur -is	gratis
3 Locative—	
-ai, -ae, -ī	prae, illi-c, isti-c, herī.
-bi	ubi, ibi
-im	illim, istim, illin-c.

D—Table of Greek Case-forms used Adverbially

(Those which only exist as adverbs are called specially 'Adverbial Cases,' or, *πτώσεις ἴδιαι* as distinguished from *πτώσεις κοιναί*)

Cases employed.	Adverbs formed		
	Substantival	Adjectival	Pronominal
1 Accusative	*δίκην*, *χάριν*, etc	Compar neut sing Superlat neut plur *μακράν* (sc *ὁδόν*)	
2 Genitive (Local)			*οὗ*, *ὅπου*, etc
3. Ablative—			
(1) Modal -ως		-ως (= -ωτ Lat -ōd)	ὧς ὅπως
-ω		-ω (Lat -ō) in *κάτω*, *κατωτέρω*, etc	ὧ-δε

Cases employed	Adverbs formed		
	Substantival	Adjectival	Pronominal
(2) Local -θεν	οἴκο-θεν οὐρανό-θεν (*caelitus*)		ὅθεν, etc
4. Locative—			
(1) -οι; -αι	οἴκοι, χαμαί		οἷ, ποῖ, etc
(2) -θι	οἴκο-θι	ν-εό-θι	ὅθι, πόθι
5 Dative (Modal) ῇ			ᾗ, ᾗπερ, etc
6 Instrumental—			
(1) -ῇ	κομιδῇ	κοινῇ, πεζῇ, etc	
(or? Dative)	σχολῇ, σιωπῇ	πάντη (Dor παντᾶ)	
(2) -α	σῖγα	τάχα, ἅμα, etc	ἵνα
(or? Acc plur)			

N B—The adverbial forms in -η, -α, classed here as instrumental cases, may possibly be Dative Sing and Accus Plur respectively But the absence of 'ι subscriptum' in one case, and the occurrence of parallel forms in -ā in the other, seem to point (cp p 131) to the -ā of Indo-European instrumental case as a common origin The pronominal adverbs ᾗ, ᾗπερ, etc appear to be dative cases with locative meaning arising from an ellipse of ὁδῷ, as in the Latin expressions *rectā (viā), quā, si quā (ratione).*

The adverbial suffixes -θα (local), -κα, -τε (temporal), and -σε (local, of direction towards) can hardly be assigned in their present form to any case-termination, but may be assumed to have had a similar origin to others which have been so assigned.

E—Adverbs in Sanskrit

Simple adverbs —

1. From cases of nouns and obsolete words
   (1) From nom. or acc. neuter of any adjective, and of certain pronouns and obsolete words.
   (2) From instrum. case (rarely dative) of nouns, pronouns, and obsolete words.

(3) From ablat. case of nouns, pronouns, and obsolete words.

(4) From locat. case of nouns and obsolete words.

2. Adverbial affixes.—e.g. **-tas** (cp. *-θεν*, Lat. *-tus*) with sense of 'with,' 'from,' **-tra** forming adverbs of *place;* **-dá** (Lat. *-de*) forming adverbs of *time*.

3. Adverbial prefixes.—e.g. **a-**, 'privative' (cp. Gk. *α-*, Lat. *in-*, Engl. *in-*, *un-*), **dus-**, **dur-** (Gk. *δυσ-*) implying 'badly,' 'with difficulty,' **su-**, 'well,' 'easily' (Gk. *εὖ*).

F.—Comparative Table of Prepositions in Sanskrit, Greek, and Latin

Sanskrit	Greek	Latin
ā, 'to,' 'near to'		ad
	ἀμφί, Ep. adv. *ἀμφίς*	(*amb-* in compounds) Germ. *um*
	ἀνά (adv. *ἄνω*)	(*an-* in an-helare, p. 157)
	ἀντί	ante
apa	*ἀπό*	ab, ab-s, ob
(dá, adverbial affix)		de
	διά	
	εἰς (= *ἐν-s*, p. 157), *ἐς*	in
	ἐν, Ep. *ἐνί*	in
	ἐκ, *ἐξ* (*ἐκ-s*)	ex, ē
api	*ἐπί*	
antar		inter, intra
	κατά (adv. *κάτω*)	
	μετά	Germ. *mit*
parā, 'back,' 'backwards'	*παρά*	
pari	*περί* (Ep. adv. *πέρι*)	per (*per-* in per-magnus)
pra	*πρό*	pro, prae (pra-i)
prati	*πρός*, Ep. *προτί*	
sam	*σύν*, *ξύν* (*κσύν*, p. 46)	cum
	ὑπέρ	super, supra
upa	*ὑπό*, Ep. *ὑπαί*	sub
—	—	—

Sanskrit	Greek.	Latin
abhi, 'to,' 'towards'	'Spurious Prepositions'	Other Prepositions of adverbial form, many of them as adverbs.
adhi, 'above'	ἄνευ	apud
anu, 'after'	ἄχρι, μέχρι	circum, circa, circiter
ati, 'across'	μεταξύ	cis, citra
ava, 'down,' 'off'	ἕνεκα	clam, coram
ud (ut), 'up,' 'upwards'	πλήν	contra, erga, extra, infra
ni, 'in,' 'on,' 'down'		juxta, penes
nis, nir, 'out'		pone (posne), post
vi, 'apart'		praeter, prope, propter
N B —But few of these are used as prepositions with case of nouns, they are more commonly prefixes to verbs or verbal derivatives		secundum
		trans, tra-
		ultra (cp ultro)
		versus, versum

GENERAL INDEX.

A

Ablative, inflections of, in Latin, 124
Accent, effect of, upon decay of vowel sounds in Latin, 60
Accusative, inflections of, in Greek, Latin, and Sanskrit, 115 sqq
Adverbial terminations, Latin, 247 sqq , Greek, 251
Adverbs originally case forms, 93
— in Sanskrit, 254
Agglutinative stage of language, 4
Alliteration, illustrative of the tendency to reduplication, 52
Alphabet, relationship of Greek to Phoenician, 40
— Phoenician, Greek, and Roman, comparative table of, 42
— Greek, changes and modifications in, 43 , Roman, 46
Analogy, influence of, upon the forms of language seen in distinctions of gender, 106 , *-ēs* nom plur of consonant-stems, 114, declension of *sus*, *grus*, and gen sing *-is* of consonant stems, and *-i* of *u* stems, 120 , dative dual in Greek, 130 , gen sing *isti*, 153 , *-σθα* of 2 sing , according to Bopp, 171 , *amaminor*, 178 , conjunctive of verbs in *-μι*, 184
Analytic languages, difference of, from synthetic, 159
Aorist, 'simple' or 'strong,' 200, reduplicated, 201
— traces of, in Latin, 201.
— 'weak' or compound, relation of, to strong Aorist, 214
— passive in Greek, 225.
Aryan, use and meaning of the term, 10
Aspirate sounds, and modifications of (spirants), 34
— changes of, in Latin, 69
Aspiration of unaspirated letters, 77
Assimilation of vowels, 61
— of consonants, 73-79
Augment, in Greek and Sanskrit, theories of its origin, 162 sqq
Auxiliary verbs, traces of, in Latin, 26
— (prosthetic) vowels and consonants, 83

C

Cases, original number of, 105
— used adverbially, 253
Chinese language, the, 4, 7, 8
Chordae vocales, their part in the formation of sound, 30
Classification of languages, morphological, 4 , genealogical, 8 sqq
— of nouns, 108
— of pronouns, 142
— of verbs, 167
Claudius, the Emperor, his attempt to introduce new letters, 47
Comparative philology, questions treated by, 1
Comparison of adjectives, 132 , comparative and superlative suffixes, *ib*
'Conjugations' of Greek verbs, 168; of Sanskrit, 202
Conjunctive, suffix of, 183-51.
Consonants, meaning of the term, 30
— classification of, 31-35.
— changes of, 63; general ten-

dencies, *ib* , substitution, 64 , loss, 70 , assimilation, 73 , dissimilation, 79
Consonants, insertion of auxiliary, 80, 84

D

Dative case, inflections of the, 127–131
Declensions of nouns, 108 , division of, into vowel- and consonant-declension, *ib*
Definite article, development of, in Romance languages, 26
Dental sounds, 33
'Dentalism,' 51.
Derivative suffixes used in formation of noun-stems, 102
Derivative verbs, formation of, by suffix *ya* (ja), 103
'Digamma Aeolicum,' the, 43, 67
Diminutives in *-ellus*, *-ollus*, *-illus*, *-ullus*, 59
Diphthongs, formation of, 36
— weakening of, to simple sounds in Latin, 56
Double consonants, when first written in Latin, 47
Dynamic change, 51 sqq

E

Etymology, general principles to be observed in, 49
'Explosive' or 'momentary' sounds, 32

F

Final sounds, loss of, etc , in Greek and Latin, 72, 73
'Fricative' or 'protracted' sounds, 32
Future Active (Greek) in *-σω*, 218 , in *-ῶ* (Attic), 219 , Latin in *-bo*, 220 , in *-so*, *-sim*, *-sere*, 221
Future Passive (Greek), 227
'Futurum exactum' in Greek and Latin, 224.

G

Gender, expression of, in Indo-European languages, 106
Genitive Case, inflections of, 118–123
Grimm's Law, formulae of, 89, 90.
Grimm's Law, original process of changes expressed by, 87
— illustrations of, 86, 91
Guttural sounds, 33

I

Imperfect Tense, forms of, in Greek, 213 , Latin (*-bam*), 224
— Subjunctive (*-rem*), 227
Inchoative verbs, 211
Indistinct articulation, changes due to, 79–84
Indo European family of languages, meaning of the term, 9 , subdivisions of, 11, 12 , comparative antiquity of, 12, 13 , table of, 13, divergence of, 16
Infinitive, not a mood but a verbal noun, 228
— forms of, in Greek, 229–232 , in Latin, 232–235
Inflectional (or terminational) stage of language, 5
Inflections of nouns, meaning of the term illustrated, 98
— of verbs variety of, 159
— effects of phonetic change upon, 22 sqq
Inscriptions, specimens of Latin, 250–45 B C , 241 sqq
Instrumental Case, inflections of, 131
Intensification of vowel-sound, 53
Iranic subdivision of Indo-European family of language, 11
Isolating stage, see 'Radical'

K

Keltic group of languages, 12, 15
Kelts, their migrations, 14
Koppa, the letter, in Phoenician, Greek, and Roman alphabets, 40, 45, 46

L

Labial sounds, 33
Labialism, 51
'Lautverschiebung' of Grimm's Law, 87
Liquid sounds, 34
Locative Case, inflections of, 126
Long vowel sound, attempts to express in Roman character, 47.

M

'Mediae,' meaning of term and various names for, 32
Medial sounds, loss of, in Greek and Latin, 71
Middle Voice, a prior development to Passive, 177
Middle or Passive (Medio-Passive) inflections, 178–183
Moods, number of possible, and meaning of term, 161
Mood-signs, position and function, 161
— forms of (Conjunctive and Optative), 183 sqq
Mutes, meaning of term, and other names for, 30

N

Nasal sounds, formation of, explained and illustrated, 33
— influence of, upon preceding sounds, 77
— insertion or addition of (Nasalisation), 55, employed in formation of present-stem, 207
National peculiarities of utterance, 84
Nominative Case, inflection of, 110
Numeral signs, Phoenician and Greek, 42, Roman, 46

O

Optative, suffix of, in Greek, 185, forms of, traceable in Latin, 186, 'Aeolic' in -σεια, 217
Orthography, fluctuations of, in Latin, 82

P

Palatal sounds, 33
Paradigms of noun-inflection, 135–141
— of pronominal inflection, 147–149
Participles, Perfect Active (Greek), 235, Present and Aorist, 236, Middle and Passive in -*μενος*, *ib*, Passive in -*tus*, 237, Fut Active in -*turus*, 240
Passive Voice, developed from Middle, 177
Perfect Active (Greek), strong and weak forms of, 193, aspirated form, 194, Homeric, 188
Perfect Active (Greek), Middle and Passive, 194
Perfect-stem, formation of, in Greek, 188 sqq in Latin, 195 sqq
Person-endings of Greek and Latin verb, 161, 169 sqq
Phonetic change, influence of, upon grammatical structure, 22 sqq
— general principles of, 29
— limited sense of, as involuntary change, 51, 56
Plautine prosody, illustrative of decay of vowel-sound, 60
Pluperfect Indicative (Greek and Latin), 223, Subjunctive (Latin), 227
Prepositions, table of in Sanskrit, Greek, and Latin, 255
Present-stem, its relation to the pure verbal-stem, 202
— different formations of, classified, 203 sqq
Pronouns, classification of, 142, inflection of, 143 sqq
'Prosthetic' (auxiliary) vowel, 83

R

Radical (or isolating) stage of language, 4
Reduplication, origin and general use of, 52
— employment of in Greek and Latin Perfect, 187, 195, Present-stem, 205, Aorist, 201
— 'Attic' in Greek, 189
Relationship between languages, evidences of, 18
— illustrations of, for Indo-European family, 23, for Romanic languages, 24, 25
Romanic or 'Romance' languages, their descent from Latin, 19
Roots, definition of, 94 sqq
— list of pronominal, 97 note

S

Sanskrit, relationship of, to Greek and Latin, 17
— alphabet, and value of to philologists, 38, Table of, Preface, *ad fin*
Scipios, epitaphs of the, 241–243
Sclavonic group of languages, 12, 15.

Semivowels (fricative consonants), as distinguished from mutes, 32
— in limited sense, consonantal sound of *i*, *u*, 35 note
Senatusconsultum de Bacchanalibus, extract from, 243
Sounds, relative strength and physical conditions of, 29
Sounds, relation of, to letters of the alphabet, 37
Spirants (*s*, *z*, *f*, *v*), their connection with *spiritus asper* and *lenis*, 35
— changes of, 65-69
'Spiritus' 'asper,' and 'lenis,' 34
Stems, how distinguished from roots and inflected words, 98
Suffixes, different kinds of, 100

Tense-stems, 160, classification of, 162
Tenues, meaning of term, and various names for, 32
Terminational stage of language, see 'Inflectional'
Teutonic group of languages, 12
Thematic (connecting) Vowel, 165
Transliteration of Sanskrit characters, Preface, *ad fin*
Turanian family of languages, 8

Verb, how distinguished from noun, 158
Verb, forms of, more complex than those of nouns, *ib*
— inflection, elements of, 161
Vocative, not a case, 105, forms of, in Greek and Latin, 117, 118
Voice, distinctions of, in Sanskrit and Greek, 177
Vowels, meaning of term 30, enumeration of, 35, 36, changes of, 56, substitution, *ib*, loss, 59, assimilation, 61, dissimilation, 62
— auxiliary, prefixed or inserted, 83
Vowel-scales, 54, 55

W

Word-formation, processes of, 99
Words, analysis of, into radical and formative elements, 92
— division of, into noun and verb exhaustive, 93

INDEX OF SOUNDS AND FORMS EXPLAINED

[N B—In order to keep Greek and Latin forms together in this Index, the different order of the respective alphabets has been thus adjusted *η*, *ω* (=*ē*, *ō*) appear under *e*, *o*, *γ* under *g*, *θ* (*th*) under *t*, *ζ* under *z*, *ξ* under *x* *φ*, *χ*, *ψ*, appear in their usual place, after *u*]

A, the vowel 35
— breaking up of, into E, O, 36, 54, 95
-*a*, accus sing, 115
ā, instrumental sing, 131
a, -*κα*, perf termination, 192, 193
-*ā*, *ă*, adverbial termination (Latin), 247
-*ā*, neuter plural, 155
-*a*, adverbial termination (Gr), 251
a, thematic, 166
ā (orig *ă*), I E conjunctive suffix, 183
-*a* weakening of, in Latin to *i*, 58
ab-sens, *prae sens*, 236
ac estis, 228
acer, *acris* 112 *acerrimus*, 134
ἄδελφε (voc), *ἀδελφός*, 117
adeo, 248
ae, nom plur, 113, gen sing, 121
ἀείδεν, infin (Doric), 231
ἀγαγεῖν, 160
ἅγιος, 66
ago, *actus*, *ἄξω*, 77
ago, in compounds -*igo*, 58
ἄγχι, 126
-*αι* (archaic), nom plur, 113, gen sing, 121
-*αινω*, -*εινω*, verbs in, 104, 209
αἰεί, *αἰές* (Doric), 126
αἰχμητά, *αἰχμητής*, 110
ἀλαλημαι, 189
alicubi, *alicunde*, 71
alis, *alid*, 153
alius *ἄλλος*, 210
ἅλλομαι (*salio*), 209.
alterae, dative, 153
am (Eng), 169
ἅμα, 131, 251.
ἄμβροτος, 84
ἄμελγες, 2 sing, 170
αμμες, *αμμε*, 66, 74, 82, 144
ἀμπεπαλών, 198
ανά, *αν*, 157, 252
ἄνασσα, 75
ἀνδρός, 83
ante-hac 124
-*ao*, -*a*, gen sing, 119
αω *αζω*, derivative verbs in, 103
Apolones (old genitive), 62
apprime, adverb, 248
ar-biter, *ar-cesso*, etc (*ad*), 65
arcesso, 223
αρήροται, 189
'*Aryan*,' meaning of the term, 10
-*ās* (archaic), nom plur, 113, acc plur, 117, gen sing (archaic), 121
-*as* (I E), gen sing, 118
asellus, 59
ᾀσεῦμαι (future), 218
ἀστήρ (*star*, *stella*, etc), 17, 83
αται, *ατο*, 3 plur (Epic), 182
'*Αθήνησι* (locative), 127
ἀτρέκης, 95
'*Atmane-pada*' (Sanskrit), 177
au, diphthong, in Latin, 36, 56
auceps, *aucup-is*, 61, 109
ausim, 66, 221
aya, verbal suffix, 103

B, formation of sound, 33
b, confusion of, with *v* sound in Latin, 68
β, use of, by Greek writers to represent Latin *v*, *ib*
b, seldom initial in Sanskrit, 90.
β parasitic, 8

b, d, parasitic, in modern languages, 84

bam, Lat imperf, 224, quantity of *ā* in, 225

βασιλέα (βασιλεύ-ς), 115, βασιλέως, 118, βασιλῆος, 165

benĕ, malĕ, 124

-bhi (-φι), instrumental sing, 131

-bi, dat sing, 143, as adverbial termination, 249

-bhyams, dat sing (pronominal), 143, *-bhyams*, dat plur, 129

bibo, 205

bifariam, adv, 249

bin (German), 169

bis = δίς, 50

-bo, Latin future in, 220, exceptional forms in, of 3rd conjugation, *ib*

bobus, bubus, 139

βοός (βού-ς), 118

boverum, etc, gen plur, 123

brother, frater, etc, 20, 91

-bus (*-bos, -bios*), dat plur, 129

C, in Latin, 31, 46

— pronunciation of, 37

capesso, 223

capio, in compounds *-cipio*, 58

-ce, enclitic termination, 157, 248

cecidi (*cado*), 59

ceteri, posteri, etc, 133

ci, pronunciation of, in Italian, 78

ci and *ti*, interchange of, in Latin, 78

cito, adv, 248

clamor, clarus, 59

Claudius, Clodius, 56

coerare, coirare (old forms of *curare*), 56

cōgo, 59

condicio, orthography of, 78.

confluxet, 228

consumpse, 228

corolla, 59

corpus, corpor-is, 58

coram, 249

credere, etc (root *dhā*), 88, 227

cuculus, 52

cucurri (*curro*), 59

cum (σύν), preposition, 50

cum (*quom, quum*), conjunction, 62

D, formation of sound, 33.

d, change of, to *l, r*, 65

d, parasitic before *y*, 80.

d, 'old' ablative termination in Latin, 124

-d, neut sing termination (pronominal), 151

dā, dha, distinction between roots,

δαιδάλεος, 53

δαπις, 64

de, preposition, 156

de, adverbial termination, 248.

δέδαε, 201

dedro, dedrot, = *dederunt*, 199

δεικνῡμι, δείκνῠμεν, quantity of, 191

δείδιμεν (Ep), δέδιμεν, 192

δειδίσσομαι, 53

δελφίν, δελφίς, 111

δή, 131

δηίοιο, 65

-dem, -do, dam, etc, 156, 249

denuo, adv, 247

deus, 156

dīco (*in dĭc are*, δἴκη), 55, 206.

dicundo (*jure*), 57, 61

δίδη διδέντων (δέω), 205

δίδωμι, 53

die, gen sing, 121

dies, Diespiter, 156

διο ς, adjectival termination, 80

diu, 248

Dius Fidius, 156

dixti, 59, 228

δίζηαι, 2 sing, 180

dominus, formation of, 98

dono dedit, 73

δος (imper), 170

δότειρα, 107, 240

δουρος (δόρυ), 119

duellum (*bellum*), *duonorum* (*bonorum*), 51

δυγόν (Boeotian) = ζυγόν, 80.

dudum, 248

duim (*duim*, δοίην), 186

-dum, 156

E, a phonetic variety of A, 36, 57, 95, position of, in scale of Latin sounds, 57

e, affinity of, to *r*, 61

-e, gen sing, 121

ĕ (orig *ē*), abl sing, 125

-ē, -ei, -i, dat or loc, 128

ĭ, pronoun, 145, declension of, 145

ĭ, for reduplication, 189.

ε, in conjug of weak aorist (Epic), 217

-ē, -ĕ, Latin adverbs in, 248.

ἦα = ἦν, 213
ἔαδον, 164
-εαι (Epic), -ει, -ῃ, 2 sing mid, 180
ecce, 248
ecus (*equus*), 62
ἐγώ, ἐγών, etc, *ego*, 142, 147
edim, 186
ᾔδεα (ᾔδειν), conjugation of, cp with Latin *videram*, 224
ἕζομαι (*sed-es*), 76
ει-, for reduplication, 189
-ει, 3 sing, 176
εἴην, optat, 186, εἴην (= ἐσ-ίην, syam, *siem*), conjugation of, *ib*
εἴκοσι, *viginti*, 78
εἶμι, εἰμί (ἐσμί), 5, 99
ειν (-εσα, εα), pluperf 1 sing, 223
-ειν, infinitive in, 231.
εἶναι ἔμμεναι, 230
εἷο, ἕο, εὗ, etc, 146
εἴπωμι, conjunctive, 169
ειρα, feminine, 107, 240
-εις, 2 sing, 170
-εις, -εσσα, adject, 235
eis, plur of *o*- stems, 114, of *i* stems, 113
-*eis*, dat plur of *is*, 63, 155
eis = *is*, 154
eis, nom plur of *is*, 114, 155
εἰς, preposition, 157
εἱστήκειν, 66
ἐκ ποντόφιν, 131
ἔκτονα, perfect, 79
ἐλάσσων, 75, 209
-ην, aor pass, 225
-εν, Doric infinitive, 231
-*ellus*, -*illus*, *ullus*, (diminutives), 59
ἤλυθον, εἰλήλουθα, 54, 83
-*em*, accus sing in Latin, 116
-*em*, subj (optative) forms in, 186
ἐμεῖο, ἐμεῦς, ἐμοῦς, gen sing, 143
ἡμεῖς, 66, 144
ἐμίν, 143
ἐμμί (Aeolic), 74, ἦν, imp, 213
-*endo* (*in*), 157
-εναι, infinitive, 230
ἔνειμα, ἔνεμμα, ἔστειλα, ἔστελλα, etc, 216
enim, *nam*, 83, 249
ἠνίπαπε (aorist), 201.
ἕννυμι, *ves tis*, 74
-*ens*, -*ent-is*, participial termination, 103, 236
ἔον (imperf εἰμί), 213
-εω, -εζω, derivative verbs in, 104, 209, 210.
-εω, gen sing of α- stems in Greek, 119
ἐώθουν, ἐωνούμην, ἑώρων, etc, 164
ἦφι βίηφι, 131
ἕπομαι, *sequor*, 50
equester, 79
equidem, *quidem*, 83
equus (ἵππος, açvas), 49, 50
erum, conjugation of, cp with Skt āsam, Gk ἦα, ἦν, 213, quantity of *ā* in, *ib*
-*ēre*, 3 plur perf indic, 58
ĕre, 2 sing pass, 58
ergo, adv, 247
ἔργον (*work*), 68, 71
eio, 221
ἔρρεον, 165
erunt, 3 plur perf indic, 199, tendency to shorten *e* of, *ib note.*
ĕs (*sum*), *ēs* (*edo*), 170
-ες, nom plur, 112, -*ēs* (Lat), 113
-*ess*, feminine termination, 108
ἔσσα (ἕννυμι), 216
esse (*edo*), 74, 233, (*sum*), 233
ἔσσευα, ἔχευα, 216, 217
ἐσ-μέν, ἐσ τέ, 17
ἐσσεῖται, Doric fut, 218
ἔσ-σι (εἶ), 17, 170
ἥσσων, 75, 209
est (*edo*), 79
ἑσταότες, 236
ἔστελλα (Aeolic), 1 aor, 74
ἦσθα, 171
ἔθην, ἐθέμην, conjugation of, 200
εὕαδε (Epic), 164
euntes, 61, 62, 236
extemplo, 247
exiet, 220

F in Latin alphabet, 43, 69
f sound, formation of, 35, pronunciation, 69
f representing aspirate sounds, 70
facesso, 223
facillimus, 75, 134.
fallo, σφάλλω, 71.
famul, 67
fari, 70
fāvi (cp *ēgi*, *jēci*, etc), quantity of, 196.
faxim, 221
femina, 70
feriae (*fes tus*), 66
ferrem, 75, 227.
fidē, gen. sing, 121.

fĭdes, fīdo, foedus (*foidos*), 55
foedos, fordeum (= *hoedus, hordeum*), 70
fores (*θύρα*, door), 70
frac-tus, frag or, 49, *frango*, 207
fui, 70, 197
fundo, σφενδόνη, 71

G, in Latin, 31, 46, pronunciation of, 37
gaudeo, gavisus, 59
γενέτειρα, 65
γεν-έ της, 165
γένος, genus, janas, 58
generis, γένους, 61, 66, 120
genus, declension of, 137
gigno, γίγνω, 205
γύναι (voc), 118

H, the character, 43
h, sound of, 34
h, insertion of, after *p, t, c r*, in Latin, 82
harena, harundo, haruspex, etc, orthography of, 82
Ἑκάβη, *Hecuba* (*Hecoba*), 61
heri (*χθές*), *hesternus*, 66, 126
hic, peculiarities in declension of, 154
hiemps, hiems, 50, 84
hisce, nom plur, 114
hoc = *huc*, 154
honŏr, honōris, 60

I, vowel, 35, semivowel (Y), *ib*, attempts to distinguish them, 47, to represent ĭ, *ib*
I, scale of, 54, 55
i sound, weakness of, 57, 59
i representing *a* in Latin, 58
ι, loss of, in Latin, 59
i, affinity of, for dental sounds, 62
i becomes *e* in contact with *a, o, u*, 62
i (*y*), sound thrown back, 104
-*i*, nom plur of Latin *o* stems, 114, gen sing, 120
-*ī* (-*ei*), abl sing, 125
-*ĭ* (Gk *ι*), loc sing (orig *in*), 126
-*i*, increase of pronominal stems by, in Latin, 152, *ι*, Greek suffix, *ib.*
ī (perf subj) and *ĭ* (2 fut. indic), confusion of, 184.
ī, characteristic of Latin perfect, 198
iam, 156
-*ιε*, -*ιη*, *ι*, Gk optative suffix, 185
ιημι, 205
ἰέναι, ἴμεναι, 230
iens, euntis, 236
ier, *i*, pass infin, 234, period of transition between, 235
illectum, cp with *elicitum*, 239
illico, adv, 247
illius, ipsius, etc, 62, 152
-*im*, accus, nouns which retain, 115
im (-*in*), locative, of pronouns, 153, as adverbial termination, 249
im, subjunctive (optat) forms in, 186
imago, imitor, 205
ἴμεν (*εἶμι*), 206, *imus* (*eo*), *ib*
-*imus*, 1 plur perf indic, quantity of, 199
inclutus, 239
induperator, 248
-*inis*, genitive from Latin nouns in -*o*(*n*), *homo*, etc, 62
inquam, 169
interdiu, 156
-*ιω*, -*io*, verb forms in, 104, 208-211
ἴομεν, conjunctive, 183
-*ιων*, *ior*, comparative suffixes, 132, 133
ἰών, ἰώνει, ἰώνγα (dialectic for *ἐγώ*), 143
ἵππος (*equus*, açvas), 49, 50, 74 82, 140
ἱππότα, ἱππότης, 110
ipsus, ipse, 58, 67, 153
-*is*, -*it*, of 3 conjug, quantity of, 210
-*is*, dat plur, 130
ἴσᾱσι, 176
ἴσμεν, 77
-*isse*, perfect infin, 198, 232
issimus, superlative, 75, 134
iste, declension of, 150
ἵστη (*ἵστα θι*), 171, *ἱστάς* (partic), 236, *ἴσθι* (*εἰμί* and *οἶδα*), 170
-*ιστο ς*, Greek superlative, 134
ἵστωρ, 79
-*it*, 3 sing perf indic, quantity of, 197 *note*
ita, 156
jugum, ζυγόν, 80
jure dicundo (dative ?), 128
ἶξον, Epic aor. *ἵκω*, 216
ἵζω, 205.

k, *k*, in Sanskrit, 33
K, in Latin, 46
KAL (Kalendae), *ib.*
-*κα*, ‘weak perfect,’ 193, aorist, *ib*
καλαύροψ, 165
καπνός, *vapor*, 50
κεκαδών, *κέκλυθι*, *κεχάροντο*, etc, 201
κένεος (Epic), 65
Κιλισσα, 210
κλαυσούμεθα, Doric future, 218
κον, aorist (*ἤμπλα-κον*, etc), 201
κορύσσω (*κόρυθ-ος*), 75, 209

L, formation of sound, 34, origin of its use as Roman numeral, 46
l, affinity of, to *u*, 61
l, interchange of, with *r*, 63, 64
λλ, by assimilation from λ*y*, 101, 104, 209
ll, in Latin forms, 210
-*la*, nom suffix, 103
lac, *lact-is*, 73
lacesso, 223
lacrima, 65
λαμβανω, 208
lautus, *lotus*, 56
λείπ-ω, ἔ-λιπ-ον, λέ-λοιπ α, 53, 54
λέλαθον, λέλαχον, 201
λιλαίεαι, 180
λίσσομαι (λιτ η), 75, 209
-λλω, verbs in, 104, 209
locassim, 221
λύσεο, 216

M, formation of sound, 33
— history of the character, 44
— origin of its use as Roman numeral, 46
-*m*, 1 sing termination, Skt and Latin, 169
-*ma*, -*mo*, -*mon*, etc, noun suffix, 102
mage (*magis*), 67.
magister, *minister*, 133
magistris, nom plur, 114
-*μαι*, -*σαι*, -*ται*, middle and pass, theories of their formation, 179
malle, 233
μαρμαίρειν, 52
-**mas** (Skt), -*μες*, -*mus*, 1 plur, 169
μαχέσομαι, *μαχέσσομαι*, *μαχοῦμαι*, 218
medius, *μέσσος*, 210
μέλι, *μέλιτ-ος*, 72.

melior, 133, form, as compared with *μᾶλλον*, 210
memoria, 53
-*μεν*, -*μες* (*mus*), 1 pers plur, 169
-*μεναι*, -*μεν*, infin in, 229
-*μενο-s*, participial suffix, 102, 236
μέριμνα, 70
-*μεθα*, -*μεσθα*, 181, -*μεθον* (dual), 182
-*μι*, 1 pers sing, 169
miles, *milit-is*, 61
μιμέομαι, 52, 206
-*mini*, 2 plur pass, 178
modo, adv, 247

N, formation of sound, 33
ν, a final sound in Greek, 72.
-*ν*, accus sing in Greek, 115
-*ν*, 1 sing termination, 169
να, -*νε*, -*νη*, -*νυ*, use of, to form the present stem, 207
-*nam*, termination, 156
ναῦς (*navis*, naus), paradigm of, 139
ναῦν, *νῆα*, 115
ne (*nae*), *ναί*, *νή*, 157, 248
-*ne*, adverbial term, 248
neg-otium (*nec*), 64
nempe, 248
νεος (navas, *novus*), 36
νεποδες, 64
nolle, 233
nos, 144, *νώ*, *νῶε*, *νῶι*, *νῶιν*, *ib*
-*ns*, accus plur in Gothic, 116
-*nt*, final sound in Latin, 72, treatment of stems in, 110, 111
num, *nunc*, 157

O, a phonetic variety of A, 36, 54, 57, 95
O *μικρόν* and Ω *μεγά*, 43
-*o*, ablat sing, 124, Latin adverbs in, 247
-*ω*, 1 pers sing, 99
-*ῳ*, -*ᾳ*, dat sing, 128
-*ω*, -*ῶ*, classification of verbs in, 168.
ὦ (*ἔσ-ω-μι*), conjugation of, 184
-*ῶ*, contracted futures in, 219, ‘Attic’ future in, *ib*
occurro (*obc*), 74
ὀδούς, *dens*, 83, 86.
-*οι*, -*αι*, nom plur, 112.
οἶδα (*ϝιδεῖν*, *video*), 68, conjugation of, compared with Skt. **veda**, Lat. *vidi*, 190.

οἶκος (*vicus*), *οἶνος* (*vinum*), 71
-οιμι, *-οιην*, optat, 185
-οιν, dat dual, 130, *-οιιν* (Epic), *ib*
oino = *unum*, 73, 242
οἶσθα, 171
ollus, *olim*, 153
ὄμμα, 74
ὄμφαλος, 83
-ων, gen plur, 122, participle, 232
ὄνομα, *nomen*, 83
οντ, participle stem, (Lat *-ent*), 232
-οντι (*-ουσι*), *-unt*, 3 pers plur, 57, 176, *-ονται*, *-οντο*, 182, 183
-όντων (Doric *-όντω*), *-unto*, 3 plur imperative, 176
-οω, *-οζω*, derivative verbs in, 104
ὀφείλω, *ὀφέλλω*, 206
ὄρσο, 181, 212
-ώς, *-υῖα*, *-ός* (*ϝοτ-*), perf participle, 231
-ως, Gk adverbial termination, 124
ὅς (*σϝος*, *suus*), 66, 145, *ὅς* and *ὁ*, 151
-oso, adjectival suffix, 235
-ου, gen sing, 119
-ου (*-εσο*, *-εο*), 2 sing mid, 180
-ουσα, fem participle, 236
ὄψ, *vox*, paradigm of, 135

P, formation of sound, 33, the character, 42
p, seldom initial in Gothic and Saxon, 90
p, insertion of, between *m* and *t*, *s*, *l*, 84, 238
paciscor, *πήγ-νυμι*, 64
padas (Skt) = *ποδός*, *πόδες*, *πόδας*, 57
pagunt (XII Tab) = *pangunt*, 202
παιπαλόεις, 53
παμφαίνειν, 53
'*Parasmai pada*' (Skt), 177
parentes, *parientes*, 202
Parilia (*Palilia*), 79
paterfamilias (gen), 121
-pe, 157, 248
πείθω, *πέποιθα*, 54
pejero, 71
pepigi (*pac-tum*), 59
πέπεισμαι, 77
πέπιθον, 201
pepuli, *expuli*, 195
-per (adverbial), 250
perperam, 249
πεσοῦμαι, future, 219.
petesso, 223
πίπτω, 53, 59
plaudo, *ex-plodo*, 56
πλευσεῖσθαι, *πλευσούμεθα*, Doric fut, 218
πλεχθείς (*πλέκ-ω*), 50, 76
πλούσιος, 78, 175
πόλεις, *πόλιες* (Ionic), 112, *πολεις*, accus plur, 117
πόλεως, *πόληος*, *πόλιος* (Ion), gen sing, 119
pone, adverb, 248
pono, *posui*, 71
posse, 233
possem, etc, 227
porgo, *porrigo* 59
pote (*potis*), 67
postridie, 126.
πούς (*pes*), 91
πρᾶγμα, *πράγματ-ος*, 98
πραξίομες (Doric) future, 65, 218
praesens, 103, 236
pridie, 156
procus, *proci*, 55
propediem, 156
-pte, adverbial termination, 248

Q, Ϙ (Koppa), 45
quaestor, *quaesitor*, 59
quaestuis, *quaesti* (gen sing), 120
quando, 248
quattuor, *τέτταρες*, 51
que, 248
ques, nom plur, 114
qui, adverb, 117, 248
quia, 247
quine, *quin*, 248
quis, *τίς*, 51.
quoad, 248
quod, 250
quoiei, dative, 128, 152, 155
quom, *quum*, *cum*, 62, 154

R, formation of sound, 34, the character, 42
r, affinity of to *e*, 61
-r (= *se*), characteristic of Latin passive terminations, 178
-re (*-se*), Latin infinitive, 232, original quantity of, 233
recepso, 221
-rem, imperf conjunctive, 227
remus, 71.
ῥέω, *ἔρρευσα*, *ἐρρύην*, etc, 70, 206
reppuli, *repperi*, *rettuli*, 195
ῥίζα (*Wurzel*, *wort*), 71, 7[illegible]

Roma, 71
-rum, gen plur, 122
-run, 126

Σ, S, different forms of, 43
s, changed to *r* between vowels in Latin, 64, 66
s (*σ*), changed to spiritus asper, 66
σ between vowels lost in Gk, 66
s, final, loss of, 67
-s, initial, loss of, 70
σσ (*ττ*), 75, 209
ss, in Latin, 75, 76
-s, nominative suffix, 110
-s (*-as*, *-ες*, *-es*), nom plur, 112
-s, 3 sing (Eng), 176
s, representing root *as*, *-ες*, various use of in verb formation, 214 *note*
-σα, 'weak aorist,' 215
-σαι, 2 sing mid, 181
sal, *ἅλς*, 64
σαν, the letter, 44
'Sanskrit,' meaning of the term, 11
σαφής, 81
σχές, 171
-sco, *-σκω*, verb forms in, 211
scopulus, *σκόπελος*, 61
secundus = *sequendus*, 57
sedes (*ἕδος*), 35, 64, 66
-σεια, 'Aeolic optative,' 217
senatuos, *senatuis*, *senati* (gen sing), 120
sepultus (*sepelio*), 61
sepositus, *sepostus*, 238
sequor, *ἕπομαι*, 50
sequor, *socius*, 55
scio, 205
-σι, *s* (Skt -si, -s), 2 sing term, 170
σι, *-σσι*, dat (locat) plur, 127
si, *sic*, 155
-σι, 3 sing, 175
-si, Latin perfect in, 196
sīdo, 205
silva, *ὕλη*, 64
sim (*siem*), conjugation of, 186
sisto, 205
σιω (Doric), future termination, 218
-σο, 2 sing mid (secondary form), 180
so, *-sim*, *-sere*, Latin future forms in, 221
-σω, formation of future in, 218–220
sollistumum (*tripudium*), 134
σῶμα, *σώματ-ος*, 72
sont (French), 17.
spar-sus, 239
ssem, plup conj, 227
-σσω (*-ττω*), verbs in, 75, 209
σφώ, *σφῶι*, etc, 145.
-st, 2 sing term (Eng and Germ), 172
statim, 249
stella, 17, 59, 83
σθα, 2 sing 171–174
-σθαι, inf, 173, 232
-σθε, 181
σθένω, 81
-σθω, 173, 182, *-σθων*, *-σθωσαν*, 182
sti, 2 sing, 173
stultus, *stolidus*, 61
sub (*ὑπό*), *sus* (*ὗς*), 35
σύν, *cum*, 50
sulcus (*ὅλκος*), 61
summus, 74
sumpsi, *sumptus* (*sumo*), 238
συρίσδες (Doric), 170
suus (*σϝος*, *ὅς*), 66, 145
sya, gen sing, 118

T, change of, to *σ* before *ι*, 78, 175, in Latin (*-ti* to *-si*), *ib*, (*-tus*, participle suffix, to *sus*), 239
-t, nominative of stems in, 111
ta, pronominal stem, declension of, 150
-tan, the root, modifications of, 95
-tar, noun suffix (agency), 7, 102, 240
-tara (*-τερο-ς*), comparative suffix, 133
τάων, gen plur, 122
tago = *tango*, 201
-τε, 2 plur, 174
τεοῖο (Epic), gen sing, 145
τεταγών, 201
τετύφθαι, 232
τετυφώς, *τετυφότ-ος*, 110
-τηρ, *τωρ*, *-τρον* (Lat *-tor*, *-trum*), noun-suffixes, 240
-th, 3 sing term (Eng), 176
θέλω, *ἐθέλω*, 83
-θην, aorist pass, 226
θῆλυς (*femina*), *θήρ* (*fera*), 35, 86, 91
θεός, vocative, 118
θές, 171
-θι, 2 sing imper, 171
θίν, *θίς*, 111
-θω (pres), *-θον* (aor), 226.
θυγάτηρ, daughter, 86
τίθητι, 3 sing, 175.

-tim, adverbial termination, 249
τίς, *quis*, 51
-tis, 2 plur , 175
-τω, *-to*, verbal suffix (present stem), 208
-τον, 2 dual, 175
-τωσαν, 3 plur imperat , 176
τρεῖς, *tres*, etc , 20, 86
τύ (*σύ*), *thou*, etc , 20, 86, 145
tugurium (*tego*), 62
τύνη (Boeotian), 145
-turus, fut participle, 240
turtur, 52
tus, participle suffix, 237 ; *t* of, softened to *s* after dental stems, 239
τυφ-θείς (*τύπ-τω*), 50
τύφθητι, 1 aor imper , 170
τύψας, *τύψαντ-ος*, 110

U, vowel sound of, 35
— character (*V*) in Greek, 43
v (=*Ϝ*), changes of, 68
u, affinity of to *l*, 61, 195
v (Latin), pronunciation of, 68
vapor, *καπνός*, 50
-vas (Skt), dual, 170
vayam (Skt), nom plur 1 pron , 170
ὕβρις (*ὑπέρ*), 64
velle, 232
Veda, *Vedic*, 53
-ui (*-vi*), Latin perfect in, 196, origin of, 197
viciens, 79
victrix, 107
vidi, conjugation of, cp with *οἶδα*, etc , 190
videram, cp with *ᾔδεα*, *ᾔδειν*, 224
viginti, *εἴκοσι*, 78
virgo, *virago*, 59
vixem, 228
ululo, 52
um, gen plur , 122, adverbial termination, 249
umerus, *umor*, orthography of, 82
-undus, gerundive termination, 57
-unt (*-οντι*, *-ουσι*), 3 pers plur , 57, 175-6
νω, *-υζω*, etc , derivative verbs in, 104
volumus, 57
vox, *vŏcis*, *vŏco*, 99
-uos, *-uus*, *-uis*, gen sing of *u*-stems, 120
ὑπό, *sub*, 35 ; *ὑπαί*, 249
ŭs, gen sing in Latin, 119, 152
ὑσμίνη, 66
usura, 236
uti, *ut*, 155, 248

Φ, in Greek alphabet, 45, as numerical sign in Roman ditto, 46
-φα, 'aspirated perfect,' 194
φάσθω, 174
φέρων, *ferens*, paradigm of, 136.
φευξοῦμαι, future, 65, 218
-φι, *-φιν* (*bhi*), instrumental, 131
φορέοισι, 3 plur (Aeolic), 176
φραζω, 76

X, history of the character, in Greek and Latin, 45, 46
χαρίεσσα, 210
χέω, *ἔχεα*, *ἔχευα*, etc , 70, 206, 216
χέρς (Aeolic) = *χείρ*, 111
χεύω (Aeolic), 68
χθών, *χθόνος*, 110
χρῆν, imperfect, 163

Ψ, the character, introduction of, 45
ψιλὰ γράμματα, *ψιλῶς γράφειν*, 32

Ξ (= *κs*), history of, 45

Y, the character, 47
y, the semivowel sound of *i*, 35
y, how represented in Greek, 65
y (*i*), influence of in assimilation, 75, 209
-ya (*ja*, *ιο*, *is*), noun suffix, 102
ya (*ιη*, *ιο*, *ι*, etc), verbal suffix, 103, 185 (optative), 208 (present stem), feminine termination, 107
-yant (*yans*, *ians*, *-ιων*, *-iōs*), comparative suffix, 132.
yug, the root, 80

Z, in Greek alphabet, 44 , in Roman, 46, 47.
Ζεύς, 76
-ζω (= *δy*, *γy*), verbs in, 104, 209.
ζυγόν (root *yug*), 80.
ζύμη, 80.

THE END.

Heinemann's Colonial Library.

Published for Sale in the British Colonies and India only.

Price 3s. 6d CLOTH, 2s. 6d PAPER, each Volume.

Noel Ainslie	*An Erring Pilgrimage*
(Anon.)	*Told in the Verandah*
Mrs. Alexander	*Mammon*
Gertrude Atherton	*The Californians*
Gertrude Atherton	*Patience Sparhawk*
Gertrude Atherton	*American Wives and English Husban*
Gertrude Atherton	*Los Cerritos*
Major-Gen Baden-Powell	*Sport in War*
Wolcott Balestier	*Benefits Forgot*
Frank Barrett	*Kitty's Father*
Frank Barrett	*The Justification of Andrew Lebrun*
Fletcher Battershall	*A Daughter of this World*
Edward Bellamy	*Equality*
Charles Benham	*The Fourth Napoleon*
E F Benson	*Mammon & Co*
E F Benson	*The Princess Sophia*
M. McDonnell Bodkin	*Paul Beck*
M. Bowles	*The Amazing Lady*
H. N Brailsford	*The Broom of the War-God*
Emma Brooke	*A Superfluous Woman*
Emma Brooke	*Transition*
Emma Brooke	*Life the Accuser*
G. B Burgin	*Fortune's Footballs*
Hall Caine	*The Eternal City*
Hall Caine	*The Christian*
Hall Caine	*The Manxman*
Hall Caine	*The Bondman*
Hall Caine	*The Scapegoat*
Bernard Capes	*The Lake of Wine*
Mrs Comyns Carr	*Cottage Folk*
R. D Chetwode	*John of Strathbourne*
A W Clarke	*Jasper Tristram*
J. MacClaren Cobban	*Pursued by the Law*
G. Colmore	*A Conspiracy of Silence*
G. Colmore	*A Daughter of Music*
Joseph Conrad	*The Nigger of the "Narcissus"*
F. C. Constable	*Aunt Judith's Island*
Stephen Crane	*Bowery Tales*
Stephen Crane	*Active Service*
Stephen Crane	*The Open Boat*
Stephen Crane	*The Third Violet*
Stephen Crane	*Pictures of War*
Gabriele D'Annunzio	*The Victim*
Gabriele D'Annunzio	*The Triumph of Death*
Gabriele D'Annunzio	*The Child of Pleasure*
Gabriele D'Annunzio	*The Virgins of the Rocks.*
R. H. Davis	*Soldiers of Fortune*
R. H. Davis	*The King's Jackal*
R. H. Davis	*The Lion and the Unicorn*
Carlton Dawe	*Captain Castle*
[illegible] Dawson	*In the Bight of Benin*

A. J Dawson	*African Nights Entertainment*
A J Dawson	*The Story of Ronald Kestrel*
A J. Dawson	*God's Foundling*
The Earl of Desart	*The Raid of the "Detrimental"*
Evelyn Dickinson	*Hearts Importunate*
Gertrude Dix	*The Image Breakers*
Ella Hepworth Dixon	*The Story of a Modern Woman*
E. Dowson & A. Moore	*A Comedy of Masks*
Mrs. Henry Dudeney	*Folly Corner*
Mrs. Henry Dudeney	*The Maternity of Harriott Wicken*
George Egerton	*Symphonies*
Chester Bailey Fernald	*Chinatown Stories*
J P. Fitzpatrick	*The Outspan*
Mrs J M Fleming (Alice M Kipling)	*A Pinchbeck Goddess*
H. Flowerdew	*A Celibate's Wife*
H. Flowerdew	*The Realist*
Jessie Fothergill	*Oriole's Daughter*
Harold Frederic	*The Market Place*
Harold Frederic	*Gloria Mundi*
Harold Frederic	*March Hares*
Harold Frederic	*Illumination*
Harold Frederic	*In the Valley*
Harold Frederic	*The Copperhead*
Harold Frederic	*The Return of the O'Mahony*
Austin Fryers	*A Pauper Millionaire*
Hamlin Garland	*The Eagle's Heart*
R. Murray Gilchrist	*The Courtesy Dame*
George Gissing	*The Odd Women*
Ellen Glasgow	*The Voice of the People*
Ellen Glasgow	*Phases of an Inferior Planet*
Edmund Gosse	*The Secret of Narcisse*
Sarah Grand	*The Beth Book*
Sarah Grand	*Ideala*
Sarah Grand	*Our Manifold Nature*
Sarah Grand	*The Heavenly Twins* (Two Vols)
Felix Gras	*The Terror*
Maxwell Gray	*The World's Mercy*
Maxwell Gray	*The House of Hidden Treasure*
Maxwell Gray	*The Last Sentence*
Maxwell Gray	*Sweethearts and Friends*
Francis Gribble	*The Things that Matter*
M Hamilton	*The Freedom of Henry Meredyth*
M. Hamilton	*A Self Denying Ordinance*
M. Hamilton	*McLeod of the Camerons*
Robert Hichens	*The Slave*
Robert Hichens	*The Londoners*
Robert Hichens	*Flames*
Robert Hichens	*An Imaginative Man*
Robert Hichens	*The Folly of Eustace*
Annie E. Holdsworth	*The Valley of the Great Shadow*
Annie E. Holdsworth	*The Gods Arrive*
Annie E. Holdsworth	*The Years that the Locust Hath Eaten*
Mrs. Hungerford	*The Hoyden*
Mrs. Hungerford	*The O'Connors of Ballinahinch*
J. R. Hutchinson	*Pirate Gold*
C. J. Cutcliffe Hyne	*The Recipe for Diamonds*
W W. Jacobs	*The Skipper's Wooing*

W. W. Jacobs	*Sea Urchins*
Henry James	*The Awkward Age*
Henry James	*What Maisie Knew*
Henry James	*Terminations*
Henry James	*Embarrassments*
Henry James	*The Other House*
Henry James	*The Spoils of Poynton*
Henry James	*The Two Magics*
Edgar Jepson	*On the Edge of the Empire*
C. F. Keary	*Herbert Vanlennert*
Elsa D'Esterre Keeling	*Appassionata*
Rudyard Kipling and Wolcott Balestier	*The Naulahka*
Harry Lander	*Lucky Bargee*
Vernon Lee	*Vanitas*
Richard Le Gallienne	*The Quest of the Golden Girl*
A. E. J. Legge	*Both Great and Small*
Mrs. Lynn Linton	*In Haste and at Leisure*
Mrs. Archibald Little	*A Marriage in China*
W. J. Locke	*At the Gate of Samaria*
Haldane Macfall	*The Wooings of Jezebel Pettyfer*
Matilda Malling	*A Romance of the First Consul*
Hector Malot	*Her own Folk*
Basil Marnan	*A Daughter of the Veldt*
Bertram Mitford	*A Romance of the Cape Frontier*
Bertram Mitford	*'Tween Snow and Fire*
William Morris	*The Wood Beyond the World*
C. R. Morse	*Life at Twenty*
Hume Nesbit	*The Land of the Hibiscus Blossom*
Max Nordau	*The Drones Must Die*
Max Nordau	*A Comedy of Sentiment*
Max Nordau	*The Malady of the Century*
W. E. Norris	*Marietta's Marriage*
W. E. Norris	*A Victim of Good Luck*
W. E. Norris	*The Countess Radna*
W. E. Norris	*The Dancer in Yellow*
W. E. Norris	*The Widower*
Lloyd Osbourne	*The Queen versus Billy*
Ouida	*The Tower of Taddeo*
Thomas Nelson Page	*Red Rock*
Gilbert Parker	*The Lane that had no Turning*
J. H. Pearce	*Eli's Daughter*
J. H. Pearce	*Ezekiel's Sin*
Max Pemberton	*The Queen of the Jesters*
Mary L. Pendered	*A Pastoral Played Out*
E. S. Phelps	*The Master of the Magicians*
F. C. Philips	*As in a Looking-Glass*
Mrs. Campbell Praed	*The Scourge Stick*
James Prior	*Forest Folk*
R. O. Prowse	*Voysey*
Edwin Pugh	*Tony Drum*
Edwin Pugh	*The Man of Straw*
Claude Rees	*Chun-ti-Kung*
Mrs. Riddell	*The Head of the Firm*
Amelie Rives	*According to St. John*
Morley Roberts	*The Colossus*
Elizabeth Robins	*Below the Salt*
Elizabeth Robins	*The Open Question*

Louis de Rougemont	*The Adventures of,* Illustrated.
Baron Russell	*The Mandate*
Anne Douglas Sedgwick	*The Confounding of Camelia*
Anne Douglas Sedgwick	*The Dull Miss Archinard*
Adeline Sergeant	*Out of Due Season*
Adeline Sergeant	*The Story of a Penitent Soul*
Adeline Sergeant	*The Failure of Sibyl Fletcher*
H. De Vere Stacpoole	*Toto (The Rapin)*
Flora Annie Steel	*The Hosts of the Lord*
Flora Annie Steel	*Voices in the Night*
Flora Annie Steel	*Miss Stuart's Legacy*
Flora Annie Steel	*The Flower of Forgiveness*
Flora Annie Steel	*Red Rowans*
Flora Annie Steel	*In the Tideway*
Flora Annie Steel	*In the Permanent Way*
Flora Annie Steel	*The Potter's Thumb*
Flora Annie Steel	*From the Five Rivers*
Flora Annie Steel	*On the Face of the Waters*
J. A. Steuart	*The Minister of State*
Robert Louis Stevenson	*The Ebb Tide*
Robert Louis Stevenson	*St Ives*
G S Street	*The Wise and the Wayward*
Halliwell Sutcliffe	*The Eleventh Commandment*
Benjamin Swift	*Nude Souls*
Tasma	*A Knight of the White Feather*
Basil Thomson	*A Court Intrigue*
Gerald H Thornhill	*The Golden Sceptre*
W. Edwards Tirebuck	*Miss Grace of All Souls'*
Kassandra Vivaria	*Via Lucis*
E L Voynich	*Jack Raymond*
E L. Voynich	*The Gadfly*
H. B. Marriott Watson	*The Rebel*
H. G. Wells	*The War of the Worlds*
H G. Wells	*Certain Personal Matters*
H. G Wells	*The Invisible Man*
H G. Wells	*The Island of Dr Moreau*
Percy White	*The Journal of a Jealous Woman*
Percy White	*A Millionaire's Daughter*
Percy White	*Mr Bailey-Martin*
Percy White	*Corruption*
Percy White	*Andrea*
Mary E. Wilkins	*Jane Field*
Mrs C. N Williamson	*Fortune's Sport*
Daniel Woodroffe	*Tangled Trinities*
I Zangwill	*The Mantle of Elijah*
I. Zangwill	*They that Walk in Darkness*
I. Zangwill	*Dreamers of the Ghetto*
I. Zangwill	*The Master*
I. Zangwill	*Children of the Ghetto*
I. Zangwill	*The King of Schnorrers*
I. Zangwill	*The Celibates' Club*
I. Zangwill	*The Premier and the Painter*
Emile Zola	*Stories for Ninon*
Z. Z.	*The World and a Man*
Z. Z.	*A Drama in Dutch*

Art.

CHARACTERS OF ROMANCE By **William Nicholson** A Portfolio of 16 Prints in Colours, of Characters famous in Fiction Price £2 2s net

1 Don Quixote 2 Miss Fotheringay and Captain Costigan
3 Mr Tony Weller 4 Mr Rochester 5 Madge Wildfire
6 Mr Jorrocks 7 Chicot 8 Commodore Trunnion
9 Vanslyperken 10 Mulvaney 11 Gargantua 12 John Silver
13 Sophia Western 14 Baron Munchausen 15 Miss Havisham
16 Porthos

⁂ These are obtainable separately, framed Price 10s 6d each net

LONDON TYPES By **William Nicholson.** With Quatorzains by W E Henley 4to, *Popular Edition*, lithographed on stout cartridge paper, 5s *Edition de Luxe* of the plates (limited), hand coloured by the artist, in portfolio Price £21 net

AN ALMANAC OF TWELVE SPORTS FOR 1901. By **William Nicholson** Twelve Coloured Plates, each illustrating a sport for the month With accompanying Rhymes by Rudyard Kipling 4to *Popular Edition*, Lithographed, price 2s 6d *Edition de Luxe* (Limited). Hand-coloured by the Artist In Portfolio Price £21 net

AN ALPHABET By **William Nicholson** Twenty-six Coloured Plates, each illustrating a letter of the Alphabet 4to *Popular Edition*, Lithographed, 5s *Library Edition*, on Dutch Hand-made Paper, mounted on brown paper and bound in cloth, gilt edges Price 12s 6d net *Edition de Luxe* (Limited) Hand-coloured by the Artist In Portfolio Price £21 net.

TWELVE PORTRAITS By **William Nicholson** Her Majesty the Queen H R H the Prince of Wales The Archbishop of Canterbury, Sir Henry Irving Mr Justice Hawkins, W E Gladstone, Madame Sarah Bernhardt, Lord Roberts Mr Whistler, Mr Rudyard Kipling, Mr Cecil Rhodes, and Prince Bismarck In Portfolio Price 21s net

⁂ A few sets Hand Coloured by the Artist In Portfolio, £21 net

PORTRAITS The above 12 Portraits also a Portrait of Lord Kitchener, uniform with the others are sold separately, mounted for framing Price 2s 6d each net Also

A NEW PORTRAIT of Lord Roberts Price 5s net

THE SQUARE BOOK OF ANIMALS By **William Nicholson** With Rhymes by Arthur Waugh The Popular Edition, lithographed on Cartridge-paper 4to boards Price 5s

⁂ Also a limited edition, on Japanese vellum Price 12s 6d net

A HISTORY OF DANCING From the Earliest Ages to Our Own Times From the French of **Gaston Vuillier** With 20 Plates in Photogravure and 409 Illustrations in the Text 4to, cloth, price 36s net, or full Vellum, gilt top, 50s net

⁂ Also 35 copies printed on Japanese Vellum (containing three additional plates), with a duplicate set of the Plates on India paper for framing Each copy numbered and signed, price £12 12s net

BRITISH CONTEMPORARY ARTISTS. Critical Studies of Watts, Millais, Alma-Tadema, Burne-Jones, Orchardson, Leighton, and Poynter By **Cosmo Monkhouse** In one Volume, Royal 8vo Illustrated Price 21s net

THE LIFE AND DEATH OF MR. BADMAN. Presented to the world in a familiar dialogue between Mr Wiseman and Mr Attentive By John Bunyan, Author of "The Pilgrim's Progress" With 12 Compositions by George Woolliscroft Rhead, and Louis Rhead,, designed to portray the deadly sins of the ungodly Mr Badman's journey from this world to hell One Volume 4to On Imitation hand-made paper. Price 15s net

⁂ Also a limited edition on Dutch Hand-made paper at £1 11s 6d. net

RUBENS. His Life, his Work, and his Time. By Emile Michel. Translated by Elizabeth Lee With 40 Coloured Plates, 40 Photogravures and 272 Text Illustrations In Two Volumes. Imperial 8vo., £2 2s net

LEONARDO DA VINCI The Artist, the Philosopher, the Scholar. Authorised Translation from the French of Eugene Muntz, Member of the Institute of France, &c In two volumes, 4to., with 20 Photogravures, 24 Coloured Plates, 2 Plates in 2 Blacks, and 252 Text Illustrations Price £2 2s net

Art.—*Continued.*

ANTONIO ALLEGRI DA CORREGGIO: His Life, His Friends, and His Time By **Dr. Corrado Ricci.** Translated by Florence Simmonds 4to, with 37 plates and 190 text illustrations, price £2 2s. net, also a limited edition on Japanese Vellum, with duplicates of the Photogravure plates on India paper, price £12 12s net

REMBRANDT: Seventeen of his Masterpieces from the Collection of his Pictures in the Cassel Gallery. Reproduced in Photogravure by the Berlin Photographic Company With an Essay by Frederick Wedmore In large portfolio 27½ inches by 20 inches

Fourteen of the first twenty-five impressions numbered and signed, Twenty Guineas net, the set After impressions Twelve Guineas net, per set

REMBRANDT His Life, His Work, and His Time. By Emile Michel, Member of the Institute of France Translated by Florence Simmonds Edited and Prefaced by Frederick Wedmore Second Edition In Two Volumes, with 76 plates and 250 text illustrations, price £2 2s *net*

⁂ A few copies of the EDITION DE LUXE of the FIRST EDITION (printed on Japanese vellum with India proof duplicates of the photogravures), are still on sale price £12 12s net

ROMAN ART Some of its principles and their application to Early Christian Painting **By Franz Wickhoff** Translated and Edited by Mrs S ARTHUR STRONG LL D With 14 Plates and numerous Text Illustrations Price £1 16s net

MASTERPIECES OF GREEK SCULPTURE A Series of Essays on the History of Art. **By Adolf Furtwangler.** Edited by E Sellers 4to, with 19 full-page and 200 text Illustrations, price £3 3s *net.*

Also an Edition de Luxe limited to 50 copies on Japanese Vellum, in Two Volumes, £12 12s *net.*

POMPEI the City, its Life and Art By Pierre Gusman Translated by FLORENCE SIMMONDS and M JOURDAIN With 500 Text Illustrations and 12 Coloured Plates, from Drawings by the Author Imperial 8vo Price £1 16s net

BEAUTY AND ART. By Aldam Heaton Crown 8vo, with hand-painted title page, 6s

ANIMAL SYMBOLISM IN ECCLESIASTICAL ARCHITECTURE By E P Evans With a Bibliography and 78 Illustrations, crown 8vo 9s

Sport, Travel, and Adventure.

THE BADMINTON MAGAZINE OF SPORTS AND PASTIMES. Edited by Alfred E T Watson Published monthly, with numerous black and white illustrations and four coloured plates in each part Price 1s net

SPORT IN WAR By Lieut -General R S S Baden-Powell, F R G S With 19 Illustrations by the Author Crown 8vo Price 3s 6d

CRICKET IN MANY CLIMES By P F Warner With 72 Illustrations from Photographs Crown 8vo Price 3s 6d or boards, 2s 6d

PINK AND SCARLET, or Hunting as a School for Soldiering By Lieut -Colonel E A H Alderson, D S C, The Queen's Own Regiment Illustrated Demy 8vo cloth Price 7s 6d net

THROUGH THE FIRST ANTARCTIC NIGHT, 1898-1899 A narrative of the voyage of the *Belgica*, among newly discovered lands, and over an unknown sea about the South Pole **By Frederick A Cook, M D**, Surgeon and Anthropologist of the Belgian Antarctic Expedition With an Appendix, containing a Summary of the Scientific Results Demy 8vo, cloth, with Four Coloured Plates, and over 100 Illustrations from Photographs and Drawings Price 20s net

A LITTLE TOUR IN FRANCE By Henry James With 94 Illustrations by JOSEPH PENNELL Pott 4to Price 10s net Also 150 Copies on Japanese Vellum Price 40s net

MOUNT OMI AND BEYOND A Record of Travel on the Thibetan Border **By Archibald John Little, F R G S** Author of "Through the Yangtsi Gorges," &c With a Map, Portrait, and 15 Illustrations, from Photographs by Mrs LITTLE Demy 8vo Price 10s net

INNERMOST ASIA Travel and Sport in the Pamirs **By Ralph P. Cobbold,** late 60th Rifles With Maps and Illustrations Demy 8vo, cloth 21s

DRIVING FOR PLEASURE; or, The Harness Stable and its Appointments By Francis T Underhill 4to, with 125 Illustrations, 28s. net.

STORIES OF GOLF. Collected by William Knight and T. T. Oliphant. With Rhymes on Golf by various hands, also Shakespeare on Golf, &c. *Enlarged Edition.* Fcap. 8vo, price 2s. 6d.

Sport, Travel and Adventure.—*Continued.*

TWELVE MONTHS IN KLONDIKE. By **Robert C. Kirk.** With 100 Illustrations and a Map Crown 8vo, 6s net

TRAVELS IN WESTERN AUSTRALIA. Being a Description of the various Cities and Towns, Goldfields and Agricultural Districts of that State By **May Vivienne** Demy 8vo Illustrated 15s net

CHINA AND THE ALLIES By **A Henry Savage-Landor** In Two Volumes, demy 8vo With numerous Maps and Illustrations, price 28s net

IN THE FORBIDDEN LAND An Account of a Journey in Tibet, Capture by the Tibetan Authorities, Imprisonment, Torture, and ultimate Release By **A. Henry Savage Landor** With 50 full-page and about 150 text illustrations, and a map Cheap Edition, 8vo, Price 7s 6d net

THE INDIAN FRONTIER CAMPAIGN An account of the Mohmund and Tirah Expedition 1897 By **Lionel James** 8vo, Illustrated, 7s 6d.

ROMANTIC INDIA By **Andre Chevrillon** Demy 8vo, 7s 6d *net.*

WITH THE ZHOB FIELD FORCE, 1890 By **Captain Crawford McFall, K O.Y L I** Demy 8vo, with Illustrations, price 18s

COREA, or, Cho-sen, The Land of the Morning Calm. By **A. Henry Savage-Landor** With Seven Full-page Plates and over Thirty Text Illustrations Demy 8vo, cloth, price 18s

UNDER THE DRAGON FLAG. My Experiences in the Chino Japanese War By **James Allan** Crown 8vo, 2s

UNDER THE AFRICAN SUN **Uganda Experiences** By **W J. Ansorge, M D, LL D, M R C S, L R C P**, Late Senior Professor at the Royal College of Mauritius, Medical Officer to Her Majesty's Government in Uganda In one volume, 8vo, with 134 illustrations and 2 coloured plates 21s net

MOGREB EL ACKSA **A Journey in Morocco** By **R B Cunninghame Graham** With a portrait In one volume, 8vo Price 9s

TIMBUCTOO THE MYSTERIOUS By **Felix Dubois** With 153 Illustrations, and 11 Maps and Plans Demy 8vo, 12s 6d

THE NEW AFRICA A Journey up the Chobe and down the Okovanga Rivers By **Aurel Schulz, M D**, and **August Hammar, C.E.** Demy 8vo, with original illustrations, 28s

ACTUAL AFRICA, or, The Coming Continent **A Tour of Exploration** By **Frank Vincent,** *Author of* "The Land of the White Elephant." With Map and over 100 Illustrations, demy 8vo, cloth, price 24s

THE LAND OF THE MUSKEG. By **H Somers Somerset.** With a Preface by A HUNGERFORD POLLEN In One Volume, demy 8vo, with Maps and 110 Illustrations, price 14s *Net*

IN THE TRACK OF THE SUN. Readings from the Diary of a Globe-Trotter By **Frederick Diodati Thompson** In One Volume, 4to With many Illustrations by Mr Harry Fenn and from Photographs, price 25s

THE WORKERS, AN EXPERIMENT IN REALITY By **Walter A. Wyckoff** Illustrated In two volumes Vol I—The East Vol II.—The West Crown 8vo, 3s net each

Gardening, Botany, and Natural History.

THE ROSE A Treatise on the Cultivation, History, Family Characteristics, &c, of the various Groups of Roses With Accurate Description of the Varieties now Generally Grown By **H B Ellwanger.** With an Introduction by GEORGE H ELLWANGER 12mo, cloth Price 5s

THE GARDEN'S STORY or, Pleasures and Trials of an Amateur Gardener By **G H Ellwanger** With an Introduction by the Rev C WOLLEY DOD 12mo, cloth with Illustrations Price 5s

NATURE'S GARDEN An Aid to Knowledge of Wild Flowers and their Insect Visitors With Coloured Plates and many other Illustrations, Photographed from Nature by HENRY TROTH and A R DUGMORE Text by **Neltje Blanchan.** Royal 8vo Price 12s 6d net

Facetiæ. &c.

JOHN HENRY By **Hugh McHugh** Foolscap 8vo Price 1s.

Mr. DOOLEY'S PHILOSOPHY With Coloured Frontispiece, by WILLIAM NICHOLSON, and Illustrations by E. W KEMBLE and F. OPPER. Crown 8vo. Price 3s. 6d.

Facetiæ, &c.—*Continued.*

THE POCKET IBSEN. A Collection of some of the Master's best known Dramas, condensed, revised, and slightly rearranged for the benefit of the Earnest Student By **F. Anstey**, Author of "Vice Versa," "Voces Populi," &c With Illustrations reproduced, by permission, from *Punch*, and a new Frontispiece by Bernard Partridge New Edition 16mo, cloth Price 3s 6d *or paper*, 2s 6d

FROM WISDOM COURT. By **Henry Seton Merriman** and **Stephen Graham Tallentyre** With 30 Illustrations by E Courboin Crown 8vo, cloth Price 3s 6d, or picture boards, 2s

WOMAN—THROUGH A MAN'S EYEGLASS By **Malcolm C Salaman.** With Illustrations by Dudley Hardy Crown 8vo, cloth, Price 3s 6d, or picture boards 2s

THE PINERO BIRTHDAY BOOK Selected and arranged by Myra Hamilton, 16mo, with a portrait, 2s 6d

THE SPINSTER'S SCRIP. As compiled by **Cecil Raynor.** Narrow foolscap, limp cloth, price 2s 6d

Juvenile.

FAIRY TALES. By **Hans Christian Andersen.** Newly translated by H L Braekstad With an Introduction by Edmund Gosse Illustrated by Hans Tegner Royal 8vo, Price 20s net, or in Two Volumes, 10s net each

FAIRY TALES FROM THE SWEDISH OF BARON DJURKLOU Translated by H L Braekstad, with illustrations by T Kittelsen and Erik Werenskiold and a Frontispiece by Carl Larsson 4to boards Price 3s. 6d

THE SQUARE BOOK OF ANIMALS By **William Nicholson.** With Rhymes by Arthur Waugh 4to boards Price 5s

*** *There is also a limited Edition on Japanese Vellum Price 12s 6d net*

THE BELOVED SON The Story of Jesus Christ, told to Children By **Mrs Francis Rye** 16mo, cloth Price 2s 6d

A BATTLE AND A BOY. By **Blanche Willis Howard** Crown 8vo, cloth gilt With 39 Illustrations by A MacNiell-Barbour Price 6s

GIRLS AND WOMEN. By **E. Chester** Pott 8vo, price 2s 6d or gilt extra, 3s 6d.

LITTLE JOHANNES. By **F. Van Eeden.** Translated from the Dutch by Clara Bell With an Introduction by Andrew Lang 16mo Price 3s *net*

Essays and Criticism.

THE ETERNAL CONFLICT An Essay By **William Romaine Paterson** (Benjamin Swift) Crown 8vo 6s

VILLAGE NOTES, and some other Papers By **Pamela Tennant.** With Illustrations from Photographs Crown 8vo Price 6s

STUDIES IN STYLE By **W H Helm** F'cap 8vo, gilt top Price 3s net

THE QUEEN'S SERVICE By **Horace Wyndham.** Crown 8vo, 3s 6d

CAN WE DISARM? By **Joseph McCabe** Written in collaboration with Georges Darien Crown 8vo, 2s 6d

TROOPER 3809 **A Private Soldier of the Third Republic** By **Lionel Decle,** Author of "Three Years in Savage Africa" With 8 Illustrations by H Chartier Crown 8vo, 6s

THE FOREIGNER IN THE FARMYARD By **Ernest E Williams.** Author of 'Made in Germany' Crown 8vo, 2s 6d

"MADE IN GERMANY." By **Ernest Edwin Williams.** Crown 8vo, Cloth, 2s 6d, paper covers, 1s

ANIMA POETÆ. A Selection from the unpublished Note Books of Samuel Taylor Coleridge Edited by E. H Coleridge Crown 8vo, price 7s 6d.

ESSAYS. By **Arthur Christopher Benson.** Crown 8vo, buckram, price 7s. 6d.

MAIN CURRENTS IN NINETEENTH CENTURY LITERATURE By **George Brandes** Volume I, "The Emigrant Literature" Demy 8vo Price 6s, net

HENRIK IBSEN AND BJORNSTJERNE BJORNSON By **George Brandes.** Authorised translation With introduction by William Archer. Demy 8vo, 10s *net*

WILLIAM SHAKESPEARE. A Critical Study. By **George Brandes.** Translated from the Danish by William Archer and Diana White. Students Edition in One Volume, Demy 8vo, 10s *net*

CORRECTED IMPRESSIONS. By **George Saintsbury.** In One Volume.

Essays and Criticism.—*Continued.*

CRITICAL KIT-KATS. By **Edmund Gosse** Crown 8vo., Buckram gilt top, 7s. 6d

GOSSIP IN A LIBRARY. By **Edmund Gosse.** Third Edition. Crown 8vo, buckram, gilt top, price 7s 6d

*** A Limited Edition on Large Paper, 25s. net

QUESTIONS AT ISSUE. Essays By **Edmund Gosse.** Crown 8vo, buckram, gilt top, price 7s 6d

*** A Limited Edition on Large Paper, 25s net

SEVENTEENTH CENTURY STUDIES A Contribution to the History of English Poetry By **Edmund Gosse.** A New Edition. Crown 8vo, buckram, gilt top, 7s 6d

THE SYMBOLIST MOVEMENT IN LITERATURE. By **Arthur Symons.** Crown 8vo, buckram, 6s

THE POSTHUMOUS WORKS OF THOMAS DE QUINCEY. Edited with Introduction and Notes from the Author's Original MSS, by ALEXANDER H JAPP, LL D, F R S E, &c Crown 8vo, price 6s each

I. Suspiria de Profundis. With other Essays —**II. Conversation and Coleridge.** With other Essays

THE PROSE WORKS OF HEINRICH HEINE Translated by CHARLES GODFREY LELAND, M A, F R L S (Hans Breitmann) In Eight Volumes, Crown 8vo, cloth, 5s per volume Cabinet Edition, boxed, price £2 10s the set Large Paper Edition, limited to 50 Numbered Copies, price £6 net the set

I Florentine Nights, &c —II, III Pictures of Travel. IV The Salon —V, VI Germany —VII, VIII French Affairs.

A COMMENTARY ON THE WORKS OF HENRIK IBSEN. By **Hjalmar Hjorth Bovesen** Crown 8vo, price 7s 6d *net.*

AMERICA TO-DAY. Observations and Reflections By **William Archer.** Crown 8vo, cloth Price 6s

AMERICA AND THE AMERICANS From a French Point of View. Crown 8vo 8s 6d

JOHN KING'S QUESTION CLASS By **Charles M Sheldon,** Author of "In His Steps," &c Crown 8vo Colonial Edition Paper, 1s

Biography and History.

THE LOVE LETTERS OF PRINCE BISMARCK Edited by **Prince Herbert Bismarck** Two Volumes, Demy 8vo, with Portraits 20s net

FROM CROMWELL TO WELLINGTON Twelve Soldiers **Edited by Spencer Wilkinson.** With an Introduction by Field-Marshal Lord ROBERTS OF KANDAHAR With Portraits and Plans 8vo, Price 10s 6d

FROM HOWARD TO NELSON Twelve Sailors **Edited by John Knox Laughton, M A** With Portraits and Maps 8vo, Price 10s 6d

WILLIAM COTTON OSWELL Hunter and Explorer The Story of his Life, with certain Correspondence and Extracts from the Private Journal of David Livingstone hitherto unpublished By his Eldest Son, W **Edward Oswell,** of the Middle Temple, Barrister-at-Law With an Introduction by FRANCIS GALTON, D C L, F R S, F R G S &c In Two Volumes With Portraits, Maps, and Illustrations Demy 8vo. Price £1 5s net

THE LIFE AND LETTERS OF JOHN DONNE (DEAN OF ST PAUL S) Now for the first time Revised and Collected by EDMUND GOSSE, M A, of Trinity College, Cambridge, Hon LL D, of the University of St Andrews In Two Volumes, 8vo Price 24s net

1812—NAPOLEON I IN RUSSIA By **Vassili Verestchagin.** With an introduction by R Whiteing Illustrated from sketches and paintings by the author Crown 8vo, 6s

MEMOIRS OF SERGEANT BOURGOGNE, 1812-1813. Authorised translation from the French original Edited by Paul Cotton and Maurice Henault With a frontispiece. 8vo., 6s.

NEW LETTERS OF NAPOLEON I. Omitted from the collection published under the auspices of Napoleon III. Translated by **Lady Mary Loyd.** Demy 8vo, with frontispiece, 15s. net.

MEMOIRS OF THE DUC DE SAINT-SIMON ON THE TIMES OF LOUIS XIV. AND THE REGENCY With 40 plates In four volumes. 8vo. £3 13s 6d *net.*

THE PRINCE DE LIGNE. His Memoirs, Letters, and Miscellaneous Papers. With Introduction and Preface by C.-A. SAINTE-BEUVE and Madame de STAËL-HOLSTEIN. Two Volumes, 42s. net.

Biography and History.—*Continued.*

THE CORRESPONDENCE OF MADAME, PRINCESS PALATINE, Mother of the Regent, of MARIE ADELAIDE DE SAVOIE, Duchesse de Bourgogne, and of Madame de MAINTENON, in relation to Saint-Cyr Preceeded by Introductions from C.-A. SAINTE BEUVE One Volume, 21s net

THE BOOK OF ILLUSTRIOUS LADIES By **Pierre de Bourdeille,** ABBÉ DE BRANTOME With Elucidations on some of those Ladies by C.-A SAINTE-BEUVE One Volume, 21s net

THE MEMOIRS OF VICTOR HUGO With a Preface by PAUL MEURICE Translated by **John W. Harding** With a Portrait 8vo, Price 10s net

PETER THE GREAT By **K Waliszewski.** Translated by **Lady Mary Loyd** 8vo With Portrait, 6s

MARYSIENKA, MARIE DE LA GRANGE D'ARQUIEN, QUEEN OF POLAND AND WIFE OF SOBIESKI By **K. Waliszewski.** Translated by Lady MARY LOYD With Portrait 12s *net*

THE PAGET PAPERS Diplomatic and other Correspondence of **The Rt. Hon Sir Arthur Paget, G.C B ,** 1794—1807 Edited by **The Rt. Hon Sir Augustus Paget, G.C.B.** (Late H.M Ambassador at Vienna) With notes by Mrs J R Green In Two Volumes. Demy 8vo, with Portraits 32s net

CARDINAL MANNING By **Francis de Pressensé.** Crown 8vo, cloth, price 5s

BROTHER AND SISTER. A **Memoir and the Letters of Ernest and Henriette Renan** Translated by **Lady Mary Loyd.** Demy 8vo, with Two Portraits, price 14s

MR FROUDE AND CARLYLE By DAVID WILSON In one volume, 8vo, 10s 6d

THE PALMY DAYS OF NANCE OLDFIELD By **Edward Robins.** In One Volume, 8vo, with 12 Illustrations, 12s 6d

CHARLES GOUNOD. Autobiographical Reminiscences with Family Letters and Notes on Music Translated by the **Hon. W. Hely Hutchinson.** Demy 8vo, with a Portrait, price 10s 6d

ROBERT EARL NUGENT. A **Memoir** By **Claud Nugent.** Demy 8vo, with Portraits, 16s

LETTERS OF SAMUEL TAYLOR COLERIDGE Edited by **Ernest Hartley Coleridge.** With Portraits and Illustrations In Two Volumes, demy 8vo, price 32s

DE QUINCEY MEMORIALS. Being Letters and other Records here first Published, with Communications from Coleridge, The Wordsworths, Hannah More, Professor Wilson, and others Edited with Introduction, Notes, and Narrative, by **Alexander H. Japp, LL.D., F.R.S.E.** In Two Volumes, demy 8vo, cloth, with Portraits, price 30s net

MEMOIRS OF THE PRINCE DE JOINVILLE. Translated from the French by Lady MARY LOYD With 78 Illustrations from drawings by the Author 8vo, price 6s

ALFRED, LORD TENNYSON. A Study of His Life and Work By **Arthur Waugh, B A., Oxon.** With Twenty Illustrations from Photographs specially taken for this Work, Five Portraits, and Facsimile of Tennyson's MS Fourth Edition 8vo, price 6s

MEMOIRS. By **Charles Godfrey Leland (Hans Breitmann).** Second Edition In One Volume, 8vo, with Portrait, price 7s 6d

VILLIERS DE L'ISLE ADAM: His Life and Works From the French of **Vicomte Robert du Pontavice de Heussey.** By Lady Mary Loyd. Crown 8vo, with Portrait and Facsimile, price 10s. 6d

THE FAMILY LIFE OF HEINRICH HEINE. Illustrated by one hundred and twenty-two hitherto unpublished letters addressed by him to different members of his family Edited by his nephew, **Baron Ludwig Von Embden,** and translated by Charles Godfrey Leland. In One Volume, 8vo, with Four Portraits, price 6s

RECOLLECTIONS OF COUNT LEO TOLSTOY. Together with a Letter to the Women of France on the "Kreutzer Sonata" By **C. A. Behrs.** Translated from the Russian by C. E. Turner, English Lecturer in the University of St. Petersburg, In One Volume, 8vo, with Portrait, price 6s.

THE LIFE OF JUDGE JEFFREYS. By **H B. Irving. M.A. Oxon.**

Biography and History.—*Continued*

STUDIES OF FRENCH CRIMINALS OF THE NINETEENTH CENTURY By **H B Irving** Demy 8vo 10s net

TWENTY-FIVE YEARS IN THE SECRET SERVICE. The Recollections of a Spy By **Major Henry Le Caron.** With New Preface 8vo, boards, price 2s. 6d , or cloth, 3s 6d

⁂ The Library Edition, with Portraits and Facsimiles, 8vo, 14s , is still on sale

THE NATURALIST OF THE SEA-SHORE The Life of Philip Henry Gosse By his son, **Edmund Gosse**, Hon M A , Trinity College, Cambridge With a Portrait 8vo , price 6s

LETTERS OF A COUNTRY VICAR From the French of **M. Guyau.** Crown 8vo , cloth 5s

THE PAGEANTRY OF LIFE By **Charles Whibley** Crown 8vo, with Frontispiece 7s 6d

STUDIES IN FRANKNESS By **Charles Whibley** Crown 8vo , with Frontispiece, price 7s 6d

A BOOK OF SCOUNDRELS By **Charles Whibley.** Crown 8vo, with Frontispiece 7s 6d

THE WOMEN OF HOMER By **Walter Copland Perry** With 22 Illustrations 8vo price 6s

KRUPP'S STEEL WORKS By **Prof F C G Muller** With 88 Illustrations Authorised Translation 4to 25s *net*

UNDER QUEEN AND KHEDIVE The Autobiography of an Anglo-Egyptian Official By **Sir W F Mieville, K C M.G** Crown 8vo , with Portrait price 6s

ANNALS OF SANDHURST A Chronicle of the Royal Military College from its Foundation to the Present Day with a Sketch of the History of the Staff College By Major A F MOCKLER-FERRYMAN With 12 full page Illustrations Demy 8vo Price 10s net

A POLITICAL HISTORY OF CONTEMPORARY EUROPE, SINCE 1814. Translated from the French of **C Seignobos** In Two Volumes. Demy 8vo Price 20s net

THE AWAKENING OF THE EAST **Siberia—Japan—China** By **Pierre Leroy-Beaulieu** Translated by RICHARD DAVEY With a Preface by HENRY NORMAN Crown 8vo Price 6s

THE GENESIS OF THE UNITED STATES A Narrative of the Movement in England 1605-1616, which resulted in the Plantation of North America by Englishmen, disclosing the Contest between England and Spain for the Possession of the Soil now occupied by the United States of America set forth through a series of Historical Manuscripts now first printed, together with a Re-issue of Rare Contemporaneous Tracts, accompanied by Bibliographical Memoranda, Notes, and Brief Biographies Collected, Arranged, and Edited by **Alexander Brown, F.R.H.S.** In two volumes, royal 8vo, buckram, with 100 Portraits, Maps, and Plans, price £3 13s 6d net

DENMARK: its History, Topography, Language, Literature, Fine Arts, Social Life, and Finance Edited by **H. Weitemeyer,** Demy 8vo, cloth, with Map, price 12s 6d

⁂ *Dedicated, by permission to H R H the Princess of Wales*

AN AMBASSADOR OF THE VANQUISHED Viscount Elie De Gontaut—Biron's Mission to Berlin, 1871—1877 From His Diaries and Memoranda. By **the Duke De Broglie.** Translated with Notes by **Albert D Vandam**, Author of "An Englishman in Paris" 8vo, 10s 6d

STUDIES IN DIPLOMACY. From the French of **Count Benedetti.** French Ambassador at the Court of Berlin 8vo, cloth with Portrait, price 10s 6d

MY PARIS NOTE-BOOK. By the Author of "An Englishman in Paris" Second Edition, 8vo, price 2s 6d net

THE LITTLE MANX NATION. (Lectures delivered at the Royal Institution, 1891) By **Hall Caine.** Crown 8vo, price, cloth, 3s 6d , paper, 2s 6d.

ISRAEL AMONG THE NATIONS. By **Anatole Leroy-Beaulieu.** Translated from the French In One Volume, 8vo, price 7s 6d

THE TRANSVAAL FROM WITHIN A Private Record of Public Affairs. By **J P FitzPatrick** 8vo , cloth, 10s net Also a Popular Edition, Crown 8vo , 2s 6d net Paper Edition, 6d net

THE WORLD'S HISTORY. **A Survey of Man's Record.** Edited by **Dr H. F. Helmolt** With an introductory essay by the Right Hon **James Bryce, D.C.L., LL D , F.R.S.** In Eight Volumes, Royal 8vo, with numerous coloured Plates, Maps, and [illegible] [illegible] 5s net. Half Morocco 21s Net

Biography and History.—*Continued*

THE SOUTH AFRICAN CONSPIRACY, or the Aims of Afrikanderdom. By Fred W Bell, F S S Demy 8vo Price 5s net

THE RISE AND FALL OF KRUGERISM A Personal Record of Forty Years in South Africa B John Scoble, *Times* Correspondent in Pretoria prior to the present war and H R Abercrombie, of the Intelligence Department Cape Colony Library Edition, 8vo, cloth Price 10s net Popular Edition, 2s 6d net

WHY KRUGER MADE WAR, or Behind the Boer Scenes By John M Buttery With Two Chapters on the Past and Future of the Rand and the Mining Industry By A Cooper Key Crown 8vo Price 3s 6d

TEN MONTHS IN THE FIELD WITH THE BOERS By an Ex-Lieutenant of General de Villebois-Mareuil With a Map and Portrait Crown 8vo Cloth 3 6

THE NEW SOUTH AFRICA Its Value and Development By W Bleloch With Illustrations, Maps and Diagrams Demy 8vo 16s net

Poetry.

THE FOREST CHAPEL, and other Poems By Maxwell Gray Author of 'The Silence of Dean Maitland' &c Fcap 8vo, 5s

POEMS FROM THE DIVAN OF HAFIZ Translated from the Persian by Gertrude Lowthian Bell Small crown 8vo, price 6s

THE POETRY OF WILFRID BLUNT Selected and arranged by W E Henley and George Wyndham With a Prefatory Note by W E Henley Crown 8vo, price 6s

THE BLACK RIDERS, and other Lines By Stephen Crane 16mo leather gilt, 3s net

FIRDAUSI IN EXILE, and other Poems By Edmund Gosse Fcap 8vo, with Frontispiece, price 3s 6d *net*

ON VIOL AND FLUTE By Edmund Gosse Fcap 8vo, with Frontispiece, price 3s 6d *net*

IN RUSSET AND SILVER Poems By Edmund Gosse, Author of "Gossip in a Library," &c F'cap price 3s 6d net

IN CAP AND GOWN Three Centuries of Cambridge Wit Edited by Charles Whibley Third Edition With Frontispiece, Crown 8vo 3s 6d *net*

A CENTURY OF GERMAN LYRICS Selected, Arranged and Translated by Kate Freiligrath Kroeker, Fcap 8vo price 3s 6d

LOVE SONGS OF ENGLISH POETS 1500-1800 With Notes by Ralph H Caine Fcap 8vo, rough edges, price 3s 6d

⁂ Large Paper Edition, limited to 100 Copies, 10s 6d net

IVY AND PASSION FLOWER Poems By Gerard Bendall, Author of "Estelle," &c, &c 12mo, cloth, price 3s 6d

VERSES By Gertrude Hall 12mo, cloth, price 3s 6d

The Drama.

HIS EXCELLENCY THE GOVERNOR A Farcical Romance in Three Acts By R Marshall 16mo, cloth 2s 6d, paper 1s 6d

THE FANTASTICKS A Romantic Comedy in Three Acts By Edmond Rostand Freely done into English Verse by George Fleming 16mo, cloth Price 2s 6d Paper 1s 6d

CYRANO DE BERGERAC A Play in Five Acts By Edmond Rostand Authorised Translation prepared with the help of the Author Small 4to, price 5s Popular Edition, 16mo cloth 2s 6d paper, 1s 6d

THE GHETTO Drama in Four Acts Freely adapted from the Dutch of Herman Heijermans Jun By Chester Bailey Fernald 16mo, cloth 2s 6d paper, 1s 6d

THE PLAYS OF W E HENLEY AND R L STEVENSON DEACON BRODIE BEAU AUSTIN ADMIRAL GUINEA. MACAIRE In one volume crown 8vo cloth An edition of 250 copies only 10s 6d net Also separately 16mo, cloth, 2s 6d, paper, 1s 6d each

THE PLAYS OF HENRIK IBSEN

THE MASTER BUILDER HEDDA GABLER LITTLE EYOLF JOHN GABRIEL BORKMAN Small 4to, cloth, 5s, paper, 1s 6d each

WHEN WE DEAD AWAKEN Small 4to, cloth Price 3s 6d

BRAND: A Dramatic Poem in Five Acts. S[illegible]to, cloth, 7s 6d

The Drama.—*Continued*

THE PLAYS OF GERHART HAUPTMANN
HANNELE LONELY LIVES THE WEAVERS 16mo, cloth, 2s 6d, paper 1s 6d each
THE SUNKEN BELL Fcap 8vo boards, 4s net

THE PRINCESSE MALEINE A Drama in Five Acts. (Translated by Gerard Harry), and **THE INTRUDER A Drama in One Act By Maurice Maeterlinck** With an Introduction by Hall Caine, and a Portrait of the Author Small 4to, cloth, 5s

THE FRUITS OF ENLIGHTENMENT A Comedy in Four Acts By Count Lyof Tolstoy Translated from the Russian by E J Dillon With Introduction by A W Pinero Small 4to, with Portrait, 5s Paper, 1s 6d

KING ERIK A Tragedy By Edmund Gosse A Re-issue with a Critical Introduction by Mr Theodore Watts Fcap 8vo, boards, 5s net

THE PLAYS OF ARTHUR W PINERO
THE TIMES THE PROFLIGATE THE CABINET MINISTER. THE HOBBY HORSE LADY BOUNTIFUL THE MAGISTRATE DANDY DICK SWEET LAVENDER THE SCHOOLMISTRESS THE WEAKER SEX THE AMAZONS THE NOTORIOUS Mrs EBBSMITH THE BENEFIT OF THE DOUBT THE SECOND Mrs TANQUERAY THE PRINCESS AND THE BUTTERFLY TRELAWNY OF THE "WELLS" THE GAY LORD QUEX. 16mo paper covers, 1s 6d or cloth, 2s 6d each

THE DRAMA Addresses By Henry Irving With Portrait by J McN Whistler Second Edition Fcap 8vo, 3s 6d

SOME INTERESTING FALLACIES OF THE MODERN STAGE An Address delivered to the Playgoers' Club at St James's Hall, on Sunday, 6th December, 1891 By Herbert Beerbohm Tree Crown 8vo, sewed, 6d net

THE TYRANNY OF TEARS A Comedy in Four Acts **By C Haddon Chambers** 16mo cloth Price 2s 6d Paper 1s 6d

THE DEAD CITY A Play in Five Acts **By Gabriele D'Annunzio** Translated by Arthur Symons Small 4to cloth Price 3s 6d

JAPANESE PLAYS AND PLAY FELLOWS By Osman Edwards With 12 Plates reproduced in Colours from Japanese Originals 8vo Price 10s net

Science and Education.

THE FRENCH AND ENGLISH WORD BOOK A New Dictionary of the French and English Languages with Indication of Pronunciation, Etymologies and Dates of Earliest Appearance of French Words in the Language **By H Edgren, Ph D and P B Burnet, M A** With an Introduction by R J Lloyd, D Litt, M A 8vo, cloth 10s, or Half Morocco 12s

THE PLAY OF MAN By Carl Groos, Professor of Philosophy in the University of Basel Translated with the author's co-operation by Elizabeth L Baldwin with a preface by J Mark Baldwin, Ph D Hon Sc (Oxon) Professor in Princeton University 7s 6d net

SEMANTICS Studies in the Science of Meaning **By Michel Bréal,** Professor of Comparative Grammar at the College de France Translated by Mrs Henry Cust With a Preface by J P Postgate, Professor of Comparative Philology at University College, London Large Crown 8vo, cloth Price 7s 6d net

TELEPHOTOGRAPHY An Elementary Treatise on the Construction and Application of the Telephotographic Lens **By Thomas R. Dallmeyer, F R A S,** Vice-President of the Royal Photographic Society 4to, cloth with 26 Plates and 68 Diagrams Price 15s net

OUTLINES OF THE EARTH'S HISTORY A Popular Study in Physiography By **N S Shaler,** Professor of Geology in Harvard University. In one volume, 8vo, with 10 full-page illustrations, 7s 6d

MOVEMENT Translated from the French of E Marey **By Eric Pritchard, M A, M B (Oxon)** In One Volume, Crown 8vo, with 170 Illustrations chiefly from instantaneous photographs Price 7s 6d.

THE STORY OF THE GREEKS. By H. A. Guerb[illegible] Crown 8vo., [illegible] Illustrations [illegible] 6d

MR WILLIAM HEINEMANN'S LIST

Science and Education—*Continued*

THE COMPLETE INDIAN HOUSEKEEPER AND COOK Giving the duties of Mistress and Servants, the General Management of the House and Practical Recipes for Cooking in all its branches By **Flora Annie Steel and Grace Gardiner.** Fourth Edition, revised to date Crown 8vo, 6s

THE COOK'S DECAMERON By **Mrs W G Waters** With 200 Recipes Crown 8vo Price 2s 6d

THE AMERICAN SALAD BOOK By **Maximilian De Loup** Crown 8vo Cloth 2s 6d

HEINEMANN'S SCIENTIFIC HANDBOOKS.

THE BIOLOGICAL PROBLEM OF TO-DAY PREFORMATION or EPIGENESIS By **Dr Oscar Hertwig.** Translated by P Chalmers Mitchell, M A Crown 8vo, cloth, 3s 6d

MANUAL OF BACTERIOLOGY By **A B Griffiths, Ph D F R S (Edin), F C S** Crown 8vo, cloth, Illustrated 7s 6d

MANUAL OF ASSAYING GOLD, SILVER, COPPER, TIN, AND LEAD ORES By **Walter Lee Brown, B Sc** Revised Corrected and considerably Enlarged, and with chapters on the Assaying of Fuels, Iron and Zinc Ores, &c By A B Griffiths, Ph D F R S Edin), F C S New Edition Crown 8vo, cloth, Illustrated, price 7s 6d

GEODESY By **J Howard Gore** Crown 8vo, cloth, Illustrated, 5s

THE PHYSICAL PROPERTIES OF GASES By **Arthur L Kimball,** of the Johns Hopkins University Crown 8vo, cloth, Illustrated, 5s

HEAT AS A FORM OF ENERGY By **Professor R H Thurston,** of Cornell University Crown 8vo, cloth, Illustrated, 5s

[illegible]ATURES OF THE WORLD

Edited by EDMUND GOSSE, LL D.

A Series of Short Histories of the Ancient and Modern Literatures of the World Each volume will treat an entire literature, and will aim at giving a uniform impression of its development, history, and character, and its relation to previous and to contemporary work

Each Volume Large Crown 8vo., Cloth, 6s

A HISTORY OF ANCIENT GREEK LITERATURE. By **Gilbert Murray,** M A, Professor of Greek in the University of Glasgow

A HISTORY OF FRENCH LITERATURE. By **Edward Dowden, D.C L.,** LL D, Professor of English Literature at the University of Dublin

A HISTORY OF MODERN ENGLISH LITERATURE By **Edmund Gosse,** Hon M A, of Trinity College, Cambridge

A HISTORY OF ITALIAN LITERATURE By **Richard Garnett, C.B.,** LL D, Keeper of Printed Books in the British Museum

A HISTORY OF SPANISH LITERATURE. By **James Fitzmaurice-Kelly,** Corresponding Member of the Spanish Academy

A HISTORY OF JAPANESE LITERATURE. By **W G. Aston, M.A.,** C.M.G, Late Acting Secretary at the British Legation at Tokio

A HISTORY OF BOHEMIAN LITERATURE. By **Francis Count Lutzow.**

A HISTORY OF RUSSIAN LITERATURE. By **K. Waliszewski**

A HISTORY OF SANSCRIT LITERATURE. By **A. A Macdonell, M.A.,** [illegible]oden professor of Sanscrit at the University of Oxford

A [illegible] OF CHINESE LITERATURE. By **Prof[illegible] A. Giles, LL.D**